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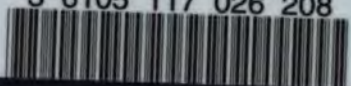
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THE COMPLETE WORKS
OF
JOHN RUSKIN, LL. D.

IN TWENTY-SIX VOLUMES

Volume Eleven



BLOSSOMING—AND STRICKEN IN DAYS.
Common Heath. (Ling.)

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Map of the Island of Java
Scale 1:100,000 (1880)

PROSERPINA

ARIADNE FLORENTINA

THE OPENING OF THE CRYSTAL PALACE

BY
JOHN RUSKIN
II



With Illustrations

PHILADELPHIA
REUWEE, WATTLEY & WALSH

1891

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PROSERPINA

STUDIES OF WAYSIDE FLOWERS

INTRODUCTION.

BRANTWOOD, 14th March, 1874.

YESTERDAY evening I was looking over the first book in which I studied Botany,—Curtis's Magazine, published in 1795 at No. 3, St. George's Crescent, Blackfriars Road, and sold by the principal booksellers in Great Britain and Ireland. Its plates are excellent, so that I am always glad to find in it the picture of a flower I know. And I came yesterday upon what I suppose to be a variety of a favourite flower of mine, called, in Curtis, "the St. Bruno's Lily."

I am obliged to say "what I suppose to be a variety," because my pet lily is branched,* while this is drawn as unbranched, and especially stated to be so. And the page of text, in which this statement is made, is so characteristic of botanical books, and botanical science, not to say all science as hitherto taught for the blessing of mankind ; and of the difficulties thereby accompanying its communication, that I extract the page entire, printing it, on page 7, as nearly as possible in facsimile.

Now you observe, in this instructive page, that you have in the first place, nine names given you for one flower ; and that among these nine names, you are not even at liberty to make your choice, because the united authority of Haller and Miller may be considered as an accurate balance to the single authority of Linnæus ; and you ought therefore for the present to remain, yourself, balanced between the sides. You may be farther embarrassed by finding that the *Anthericum* of Savoy

* At least, it throws off its flowers on each side in a bewilderingly pretty way ; a real lily can't branch, I believe : but, if not, what is the use of the botanical books saying "on an unbranched stem" ?

is only described as growing in Switzerland. And farther still, by finding that Mr. Miller describes two varieties of it, which differ only in size, while you are left to conjecture whether the one here figured is the larger or smaller ; and how great the difference is.

Farther, If you wish to know anything of the habits of the plant, as well as its nine names, you are informed that it grows both at the bottoms of the mountains, and the tops ; and that, with us, it flowers in May and June,—but you are not told when, in its native country.

The four lines of the last clause but one, may indeed be useful to gardeners ; but—although I know my good father and mother did the best they could for me in buying this beautiful book ; and though the admirable plates of it did their work, and taught me much, I cannot wonder that neither my infantine nor boyish mind was irresistibly attracted by the text of which this page is one of the most favourable specimens ; nor, in consequence, that my botanical studies were—when I had attained the age of fifty—no farther advanced than the reader will find them in the opening chapter of this book.

Which said book was therefore undertaken, to put, if it might be, some elements of the science of botany into a form more tenable by ordinary human and childish faculties ; or—for I can scarcely say I have yet any tenure of it myself—to make the paths of approach to it more pleasant. In fact, I only know, of it, the pleasant distant effects which it bears to simple eyes ; and some pretty mists and mysteries, which I invite my young readers to pierce, as they may, for themselves,—my power of guiding them being only for a little way.

Pretty mysteries, I say, as opposed to the vulgar and ugly mysteries of the so-called science of botany,—exemplified sufficiently in this chosen page. Respecting which, please observe farther ;—Nobody—I can say this very boldly—loves Latin more dearly than I ; but, precisely because I do love it (as well as for other reasons), I have always insisted that books, whether scientific or not, ought to be written either in Latin, or English ; and not in a doggish mixture of the refuse of both.

Linnaeus wrote a noble book of universal Natural History in Latin. It is one of the permanent classical treasures of the world. And if any scientific man thinks his labours are worth the world's attention, let him, also, write what he has to say in Latin, finishedly and exquisitely, if it take him a month to a page.*

But if—which, unless he be one chosen of millions, is assuredly the fact—his lucubrations are only of local and temporary consequence, let him write, as clearly as he can, in his native language.

This book, accordingly, I have written in English; (not, by the way, that I *could* have written it in anything else—so there are small thanks to me); and one of its purposes is to interpret, for young English readers, the necessary European Latin or Greek names of flowers, and to make them vivid and vital to their understandings. But two great difficulties occur in doing this. The first, that there are generally from three or four, up to two dozen, Latin names current for every flower; and every new botanist thinks his eminence only to be properly asserted by adding another.

The second, and a much more serious one, is of the Devil's own contriving—(and remember I am always quite serious when I speak of the Devil,)—namely, that the most current and authoritative names are apt to be founded on some unclean or debasing association, so that to interpret them is to defile the reader's mind. I will give no instance; too many will at once occur to any learned reader, and the unlearned I need not vex with so much as one: but, in such cases, since I could only take refuge in the untranslated word by leaving other Greek or Latin words also untranslated, and the nomenclature still entirely senseless,—and I do not choose to do this,—there is only one other course open to me, namely, to substitute boldly, to my own pupils, other generic names for the plants thus faultfully hitherto titled.

As I do not do this for my own pride, but honestly for my

* I have by happy chance just added to my Oxford library the poet Gray's copy of Linnaeus, with its exquisitely written Latin notes, exemplary alike to scholar and naturalist.

reader's service, I neither question nor care how far the emendations I propose may be now or hereafter adopted. I shall not even name the cases in which they have been made for the serious reason above specified ; but even shall mask those which there was real occasion to alter, by sometimes giving new names in cases where there was no necessity of such kind. Doubtless I shall be accused of doing myself what I violently blame in others. I do so ; but with a different motive—of which let the reader judge as he is disposed. The practical result will be that the children who learn botany on the system adopted in this book will know the useful and beautiful names of plants hitherto given, in all languages ; the useless and ugly ones they will not know. And they will have to learn one Latin name for each plant, which, when differing from the common one, I trust may yet by some scientific persons be accepted, and with ultimate advantage.

The learning of the one Latin name—as, for instance, *Gramen striatum*—I hope will be accurately enforced always ;—but not less carefully the learning of the pretty English one—“*Ladielace Grass*”—with due observance that “*Ladies' laces hath leaves like unto Millet in fashion with many white vaines or ribs, and silver strakes running along through the midst of the leaves, fashioning the same like to laces of white and green silk, very beautiful and faire to behold.*”

I have said elsewhere, and can scarcely repeat too often, that a day will come when men of science will think their names disgraced, instead of honoured, by being used to barbarise nomenclature ; I hope therefore that my own name may be kept well out of the way ; but, having been privileged to found the School of Art in the University of Oxford, I think that I am justified in requesting any scientific writers who may look kindly upon this book, to add such of the names suggested in it as they think deserving of acceptance, to their own lists of synonyms, under the head of “*Schol. Art. Oxon.*”

The difficulties thrown in the way of any quiet private student by existing nomenclature may be best illustrated by my simply stating what happens to myself in endeavouring

to use the page above facsimile'd. Not knowing how far St. Bruno's Lily might be connected with my own pet one, and not having any sufficient book on Swiss botany, I take down Loudon's Encyclopædia of Plants, (a most useful book, as far as any book in the present state of the science *can* be useful,) and find, under the head of Anthericum, the Savoy Lily indeed, but only the following general information :—"809. Anthericum. A name applied by the Greeks to the stem of the asphodel, and not misapplied to this set of plants, which in some sort resemble the asphodel. Plants with fleshy leaves, and spikes of bright *yellow* flowers, easily cultivated if kept dry."

Hunting further, I find again my Savoy lily called a spider-plant, under the article Hemerocallis, and the only information which the book gives me under Hemerocallis, is that it means 'beautiful day' lily; and then, "This is an ornamental genus of the easiest culture. The species are remarkable among border flowers for their fine *orange, yellow, or blue* flowers. The Hemerocallis *cœrulea* has been considered a distinct genus by Mr. Salisbury, and called Saussurea." As I correct this sheet for press, however, I find that the Hemerocallis is now to be called 'Funkia,' "in honour of Mr. Funk, a Prussian apothecary."

All this while, meantime, I have a suspicion that my pet Savoy Lily is not, in existing classification, an Anthericum, nor a Hemerocallis, but a *Lilium*. It is, in fact, simply a Turk's cap which doesn't curl up. But on trying '*Lilium*' in Loudon, I find no mention whatever of any wild branched white lily.

I then try the next word in my specimen page of Curtis; but there is no '*Phalangium*' at all in Loudon's index. And now I have neither time nor mind for more search, but will give, in due place, such account as I can of my own dwarf branched lily, which I shall call St. Bruno's, as well as this *Liliastrum*—no offence to the saint, I hope. For it grows very gloriously on the limestones of Savoy, presumably, therefore, at the Grande Chartreuse; though I did not notice it there, and made a very unmonkish use of it when I gathered

it last :—There was a pretty young English lady at the table-d'hôte, in the Hotel du Mont Blanc at St. Martin's,* and I wanted to get speech of her, and didn't know how. So all I could think of was to go half-way up the Aiguille de Varens, to gather St. Bruno's lilies ; and I made a great cluster of them, and put wild roses all around them as I came down. I never saw anything so lovely ; and I thought to present this to her before dinner,—but when I got down, she had gone away to Chamouni. My Fors always treated me like that, in affairs of the heart.

I had begun my studies of Alpine botany just eighteen years before, in 1842, by making a careful drawing of wood-sorrel at Chamouni ; and bitterly sorry I am, now, that the work was interrupted. For I drew, then, very delicately ; and should have made a pretty book if I could have got peace. Even yet, I can manage my point a little, and would far rather be making outlines of flowers, than writing ; and I meant to have drawn every English and Scottish wild flower, like this cluster of bog heather opposite,†—back, and profile, and front. But 'Blackwood's Magazine,' with its insults to Turner, dragged me into controversy ; and I have not had, properly speaking, a day's peace since ; so that in 1868 my botanical studies were advanced only as far as the reader will see in next chapter ; and now, in 1874, must end altogether, I suppose, heavier thoughts and work coming fast on me. So that, finding among my notebooks, two or three, full of broken materials for the proposed work on flowers ; and, thinking they may be useful even as fragments, I am going to publish them in their present state,—only let the reader note that while my other books endeavour, and claim, so far as they reach, to give trustworthy knowledge of their subjects, this one only shows how such knowledge may be obtained ; and it is little

* It was in the year 1860, in June.

† Admirably engraved by Mr. Burgess, from my pen drawing, now at Oxford. By comparing it with the plate of the same flower in Sowerby's work, the student will at once see the difference between attentive drawing, which gives the cadence and relation of masses in a group, and the mere copying of each flower in an unconsidered huddle.

more than a history of efforts and plans,—but of both, I believe, made in right methods.

One part of the book, however, will, I think, be found of permanent value. Mr. Burgess has engraved on wood, in reduced size, with consummate skill, some of the excellent old drawings in the *Flora Danica*, and has interpreted, and facsimile'd, some of his own and my drawings from nature, with a vigour and precision unsurpassed in woodcut illustration, which render these outlines the best exercises in black and white I have yet been able to prepare for my drawing pupils. The larger engravings by Mr. Allen may also be used with advantage as copies for drawings with pen or sepia.

ROME, 10th May (*my father's birthday*).

I found the loveliest blue asphodel I ever saw in my life, yesterday, in the fields beyond Monte Mario,—a spire two feet high, of more than two hundred stars, the stalks of them all deep blue, as well as the flowers. Heaven send all honest people the gathering of the like, in Elysian fields, some day!

PROSERPINA.

CHAPTER I

MOSS.

DENMARK HILL, 3rd November, 1868.

1. It is mortifying enough to write,—but I think thus much ought to be written,—concerning myself, as ‘the author of Modern Painters.’ In three months I shall be fifty years old: and I don’t at this hour—ten o’clock in the morning of the two hundred and sixty-eighth day of my forty-ninth year—know what ‘moss’ is.

There is nothing I have more *intended* to know—some day or other. But the moss ‘would always be there’; and then it was so beautiful, and so difficult to examine, that one could only do it in some quite separated time of happy leisure—which came not. I never was like to have less leisure than now, but I *will* know what moss is, if possible, forthwith.

2. To that end I read preparatorily, yesterday, what account I could find of it in all the botanical books in the house. Out of them all, I get this general notion of a moss,—that it has a fine fibrous root,—a stem surrounded with spirally set leaves,—and produces its fruit in a small case, under a cap. I fasten especially, however, on a sentence of Louis Figuier’s, about the particular species, *Hypnum* :—

“These mosses, which often form little islets of verdure at the feet of poplars and willows, are robust vegetable organisms, which do not decay.” *

3. “Qui ne pourrissent point.” What do they do with themselves, then?—it immediately occurs to me to ask. And, secondly,—If this immortality belongs to the *Hypnum* only?

* “Histoire des Plantes.” Ed. 1865, p. 416.

It certainly does not, by any means : but, however modified or limited, this immortality is the first thing we ought to take note of in the mosses. They are, in some degree, what the "everlasting" is in flowers. Those minute green leaves of theirs do not decay, nor fall.

But how do they die, or how stop growing, then ?—it is the first thing I want to know about them. And from all the books in the house, I can't as yet find out this. Meanwhile I will look at the leaves themselves.

4. Going out to the garden, I bring in a bit of old brick, emerald green on its rugged surface,* and a thick piece of mossy turf.

First, for the old brick : To think of the quantity of pleasure one has had in one's life from that emerald green velvet,—and yet that for the first time to-day I am verily going to look at it ! Doing so, through a pocket lens of no great power, I find the velvet to be composed of small star-like groups of smooth, strong, oval leaves,—intensely green, and much like the young leaves of any other plant, except in this ;—they all have a long brown spike, like a sting, at their ends.



FIG. 1.

5. Fastening on that, I take the *Flora Danica*,† and look through its plates of mosses, for their leaves only ; and I find, first, that this spike, or strong central rib, is characteristic ;—secondly, that the said leaves are apt to be not only spiked, but serrated, and otherwise angry-looking at the points ;—thirdly, that they have a tendency to fold together in the centre (Fig. 1 ‡) ; and at last, after an hour's work at them, it strikes me

* The like of it I have now painted, Number 281, CASE XII., in the Educational Series of Oxford.

† Properly, *Floræ Danicæ*, but it is so tiresome to print the diphthongs that I shall always call it thus. It is a folio series, exquisitely begun, a hundred years ago ; and not yet finished.

‡ Magnified about seven times. See note at end of this chapter.

suddenly that they are more like pineapple leaves than anything else.

And it occurs to me, very unpleasantly, at the same time, that I don't know what a pineapple is!

Stopping to ascertain that, I am told that a pineapple belongs to the 'Bromeliaceæ'—(can't stop to find out what that means)—nay, that of these plants "the pineapple is the representative" (London); "their habit is acid, their leaves rigid, and toothed with spines, their bractæas often coloured with scarlet, and their flowers either white or blue"—(what are their flowers like?) But the two sentences that most interest me, are, that in the damp forests of Carolina, the *Tillandsia*, which is an 'epiphyte' (*i.e.*, a plant growing on other plants,) "forms dense festoons among the branches of the trees, vegetating among the black mould that collects upon the bark of trees in hot damp countries; other species are inhabitants of deep and gloomy forests, and others form, with their spring leaves, an impenetrable herbage in the Pampas of Brazil." So they really seem to be a kind of moss, on a vast scale.

6. Next, I find in Gray,* *Bromeliaceæ*, and—the very thing I want—"Tillandsia, the black moss, or long moss, which, like most *Bromelias*, grows on the branches of trees." So the pineapple is really a moss; only it is a moss that flowers but 'imperfectly.' "The fine fruit is caused by the consolidation of the imperfect flowers." (I wish we could consolidate some imperfect English moss-flowers into little pineapples then,—though they were only as big as filberts.) But we cannot follow that farther now; nor consider when a flower is perfect, and when it is not, or we should get into morals, and I don't know where else; we will go back to the moss I have gathered, for I begin to see my way, a little, to understanding it.

7. The second piece I have on the table is a cluster—an inch or two deep—of the moss that grows everywhere, and that the birds use for nest-building, and we for packing, and

* American,—'System of Botany,' the best technical book I have

the like. It is dry, since yesterday, and its fibres define themselves against the dark ground in warm green, touched with a glittering light. Note that burnished lustre of the minute leaves; they are necessarily always relieved against dark hollows, and this lustre makes them much clearer and brighter than if they were of dead green. In that lustre—and it is characteristic of them—they differ wholly from the dead, aloe-like texture of the pineapple leaf; and remind me, as I look at them closely, a little of some conditions of chaff, as on heads of wheat after being threshed. I will hunt down that clue presently; meantime there is something else to be noticed on the old brick.

8. Out of its emerald green cushions of minute leaves, there rise, here and there, thin red threads, each with a little brown cap, or something like a cap, at the top of it. These red threads shooting up out of the green tufts, are, I believe, the fructification of the moss; fringing its surface in the woods, and on the rocks, with the small forests of brown stems, each carrying its pointed cap or crest—of infinitely varied ‘mode,’ as we shall see presently; and, which is one of their most blessed functions, carrying high the dew in the morning; every spear balancing its own crystal globe.

9. And now, with my own broken memories of moss, and this unbroken, though unfinished, gift of the noble labour of other people, the *Flora Danica*, I can generalize the idea of the precious little plant, for myself, and for the reader.

All mosses, I believe, (with such exceptions and collateral groups as we may afterwards discover, but they are not many.) that is to say, some thousands of species, are, in their strength of existence, composed of fibres surrounded by clusters of dry spinous leaves, set close to the fibre they grow on. Out of this leafy stem descends a fibrous root, and ascends in its season, a capped seed.

We must get this very clearly into our heads. Fig. 2, A, is a little tuft of a common wood moss of Norway,* in its fruit season, of its real size; but at present I want to look at the

* ‘*Pieranum cerviculatum*,’ sequel to *Flora Danica*, Tab. MCCCX.

central fibre and its leaves accurately, and understand that first.

10. Pulling it to pieces, we find it composed of seven little company-keeping fibres, each of which, by itself, appears as in Fig. 2, B: but as in this, its real size, it is too small, not indeed for our respect, but for our comprehension, we magnify it, Fig. 2, c, and thereupon perceive it to be indeed composed of, *a*, the small fibrous root which sustains the plant; *b*, the leaf-surrounded stem which is the actual being, and main creature, moss; and, *c*, the aspirant pillar, and cap, of its fructification.

11. But there is one minor division yet. You see I have drawn the central part of the moss plant (*b*, Fig. 2,) half in outline and half in black; and that, similarly, in the upper group, which is too small to show the real roots, the base of the cluster is black. And you remember, I doubt not, how often in gathering what most invited gathering, of deep green, starry, perfectly soft and living wood-moss, you found it fall asunder in your hand into multitudes of separate threads, each with its bright green crest, and long root of blackness.

That blackness at the root—though only so notable in this wood-moss and collateral species, is indeed a general character of the mosses, with rare exceptions. It is their funeral blackness;—that, I perceive, is the way the moss leaves die. They do not fall—they do not visibly decay. But they decay invisibly, in continual secession, beneath the ascending crest. They rise to form that crest, all green and bright, and take the light and air from those out of which they grew; and those, their ancestors, darken and die slowly, and at last become a mass of mouldering ground. In fact, as I perceive farther, their final duty is so to die. The main work of other leaves is in their life,—but these have to form the earth out of which



FIG. 2.

all other leaves are to grow. Not to cover the rocks with golden velvet only, but to fill their crannies with the dark earth, through which nobler creatures shall one day seek their being.

12. "Grant but as many sorts of mind as moss." Pope could not have known the hundredth part of the number of 'sorts' of moss there are ; and I suppose he only chose the word because it was a monosyllable beginning with m, and the best English general expression for despised and minute structures of plants. But a fate rules the words of wise men, which makes their words truer, and worth more, than the men themselves know. No other plants have so endless variety on so similar a structure as the mosses ; and none teach so well the humility of Death. As for the death of our bodies, we have learned, wisely, or unwisely, to look the fact of that in the face. But none of us, I think, yet care to look the fact of the death of our minds in the face. I do not mean death of our souls, but of our mental work. So far as it is good *art*, indeed, and done in realistic form, it may perhaps not die ; but so far as it was only good *thought*—good, for its time, and apparently a great achievement therein—that good, useful thought may yet in the future become a foolish thought, and then die quite away,—it, and the memory of it,—when better thought and knowledge come. But the better thought could not have come if the weaker thought had not come first, and died in sustaining the better. If we think honestly, our thoughts will not only live usefully, but even perish usefully—like the moss—and become dark, not without due service. But if we think dishonestly, or malignantly, our thoughts will die like evil fungi,—dripping corrupt dew.

13. But farther. If you have walked moorlands enough to know the look of them, you know well those flat spaces or causeways of bright green or golden ground between the heathy rock masses ; which signify winding pools and inlets of stagnant water caught among the rocks ;—pools which the deep moss that covers them *blanched*, not black, at the root, —is slowly filling and making firm ; whence generally the unsafe ground in the moorland gets known by being *mossy* instead of heathy, and is at last called by its riders, briefly,

'the Moss': and as it is mainly at these same mossy places that the riding is difficult, and brings out the gifts of horse and rider, and discomfits all followers not similarly gifted, the skilled crosser of them got his name, naturally, of 'moss-rider,' or moss-trooper. In which manner the moss of Norway and Scotland has been a taskmaster and Maker of Soldiers, as yet, the strongest known among natural powers. The lightning may kill a man, or cast down a tower, but these little tender leaves of moss—they and their progenitors—have trained the Northern Armies.

14. So much for the human meaning of that decay of the leaves. Now to go back to the little creatures themselves. It seems that the upper part of the moss fibre is especially undecaying among leaves; and the lower part, especially decaying. That, in fact, a plant of moss-fibre is a kind of persistent state of what is, in other plants, annual. Watch the year's growth of any luxuriant flower. First it comes out of the ground all fresh and bright; then, as the higher leaves and branches shoot up, those first leaves near the ground get brown, sickly, earthy,—remain for ever degraded in the dust, and under the dashed slime in rain, staining, and grieving, and loading them with obloquy of envious earth, half-killing them,—only life enough left in them to hold on the stem, and to be guardians of the rest of the plant from all they suffer;—while, above them, the happier leaves, for whom they are thus oppressed, bend freely to the sunshine, and drink the rain pure.

The moss strengthens on a diminished scale, intensifies, and makes perpetual, these two states,—bright leaves above that never wither, leaves beneath that exist only to wither.

15. I have hitherto spoken only of the fading moss as it is needed for change into earth. But I am not sure whether a yet more important office, in its days of age, be not its use as a colour.

We are all thankful enough—as far as we ever are so—for green moss, and yellow moss. But we are never enough grateful for black moss. The golden would be nothing without it, nor even the grey.

It is true that there are black lichens enough, and brown ones: nevertheless, the chief use of lichens is for silver and gold colour on rocks; and it is the dead moss which gives the leopard-like touches of black. And yet here again—as to a thing I have been looking at and painting all my life—I am brought to pause, the moment I think of it carefully. The black moss which gives the precious Velasquez touches, lies, much of it, flat on the rocks; radiating from its centres—powdering in the fingers, if one breaks it off, like dry tea. Is it a black species? or a black-parched state of other species, perishing for the sake of Velasquez effects, instead of accumulation of earth? and, if so, does it die of drought, accidentally, or, in a sere old age, naturally? and how is it related to the rich green bosses that grow in deep velvet? And there again is another matter not clear to me. One calls them 'velvet' because they are all brought to an even surface at the top. Our own velvet is reduced to such trimness by cutting. But how is the moss trimmed? By what scissors? Carefullest Elizabethan gardener never shaped his yew hedge more daintily than the moss fairies smooth these soft rounded surfaces of green and gold. And just fancy the difference, if they were ragged! If the fibres had every one of them leave to grow at their own sweet will, and to be long or short as they liked, or, worse still, urged by fairy prizes into laboriously and agonizingly trying which could grow longest. Fancy the surface of a spot of competitive moss!

16. But how is it that they are subdued into that spherical obedience, like a crystal of wavellite? * Strange—that the vegetable creatures growing so fondly on rocks should form themselves in that mineral-like manner. It is true that the tops of all well-grown trees are rounded, on a large scale, as equally; but that is because they grow from a central stem, while these mossy mounds are made out of independent filaments, each growing to exactly his proper height in the sphere—short ones outside, long in the middle. Stop, though; is that so? I am not even sure of that; perhaps they are built

*The reader should buy a small specimen of this mineral; it is a useful type of many structures.

over a little dome of decayed moss below.* I must find out how every filament grows, separately—from root to cap, through the spirally set leaves. And meanwhile I don't know very clearly so much as what a root is—or what a leaf is. Before puzzling myself any farther in examination either of moss or any other grander vegetable, I had better define these primal forms of all vegetation, as well as I can—or rather begin the definition of them, for future completion and correction. For, as my reader must already sufficiently perceive, this book is literally to be one of studies—not of statements. Some one said of me once, very shrewdly, When he wants to work out a subject, he writes a book on it. That is a very true saying in the main,—I work down or up to my mark, and let the reader see process and progress, not caring to conceal them. But this book will be nothing but process. I don't mean to assert anything positively in it from the first page to the last.

* LUCCA, *Aug. 9th*, 1874.—I have left this passage as originally written, but I believe the dome is of accumulated earth. Bringing home, here, evening after evening, heaps of all kinds of mosses from the hills among which the Archbishop Ruggieri was hunting the wolf and her whelps in Ugolino's dream, I am more and more struck, every day, with their special function as earth-gatherers, and with the enormous importance to their own brightness, and to our service, of that dark and degraded state of the inferior leaves. And it fastens itself in my mind mainly as their distinctive character, that as the leaves of a tree become wood, so the leaves of a moss become earth, while yet a normal part of the plant. Here is a cake in my hand weighing half a pound, bright green on the surface, with minute crisp leaves; but an inch thick beneath in what looks at first like clay, but is indeed knitted fibre of exhausted moss. Also, I don't at all find the generalization I made from the botanical books likely to have occurred to me from the real things. No moss leaves that I can find here give me the idea of resemblance to pineapple leaves; nor do I see any, through my weak lens, clearly serrated; but I do find a general tendency to run into a silky filamentous structure, and in some, especially on a small one gathered from the fissures in the marble of the cathedral, white threads of considerable length at the extremities of the leaves, of which threads I remember no drawing or notice in the botanical books. Figure 1 represents, magnified, a cluster of these leaves, with the germinating stalk springing from their centre; but my scrawl was tired and careless, and for once, Mr. Burgess has copied *too* accurately.

Whatever I say, is to be understood only as a conditional statement—liable to, and inviting, correction. And this the more because, as on the whole, I am at war with the botanists, I can't ask them to help me, and then call them names afterwards. I hope only for a contemptuous heaping of coals on my head by correction of my errors from them ; in some cases, my scientific friends will, I know, give me forgiving aid ;—but, for many reasons, I am forced first to print the imperfect statement, as I can independently shape it ; for if once I asked for, or received help, every thought would be frost-bitten into timid expression, and every sentence broken by apology. I should have to write a dozen of letters before I could print a line, and the line, at last, would be only like a bit of any other botanical book—trustworthy, it might be, perhaps ; but certainly unreadable. Whereas now, it will rather put things more forcibly in the reader's mind to have them retouched and corrected as we go on ; and our natural and honest mistakes will often be suggestive of things we could not have discovered but by wandering.

On these guarded conditions, then, I proceed to study, with my reader, the first general laws of vegetable form.

CHAPTER II.

THE ROOT.

1. PLANTS in their perfect form consist of four principal parts,—the Root, Stem, Leaf, and Flower. It is true that the stem and flower are parts, or remnants, or altered states, of the leaves ; and that, speaking with close accuracy, we might say, a perfect plant consists of leaf and root. But the division into these four parts is best for practical purposes, and it will be desirable to note a few general facts about each, before endeavouring to describe any one kind of plant. Only, because the character of the stem depends on the nature of the leaf and flower, we must put it last in order of examination ; and trace the development of the plant first in root and leaf ; then in the flower and its fruit ; and lastly in the stem.

2. First, then, the Root.

Every plant is divided, as I just said, in the main, into two parts, and these have opposite natures. One part seeks the light ; the other hates it. One part feeds on the air ; the other on the dust.

The part that loves the light is called the Leaf. It is an old Saxon word ; I cannot get at its origin. The part that hates the light is called the Root.

In Greek, *ρίζα*, Rhiza.*

In Latin, Radix, "the growing thing," which shortens, in French, into Race, and then they put on the diminutive 'ine,' and get their two words, Race, and Racine, of which we keep Race for animals, and use for vegetables a word of our own Saxon (and Dutch) dialect,—'root ;' (connected with Rood—an image of wood ; whence at last the Holy Rood, or Tree).

3. The Root has three great functions :

- 1st. To hold the plant in its place.
- 2nd. To nourish it with earth.
- 3rd. To receive vital power for it from the earth.

With this last office is in some degree,—and especially in certain plants,—connected, that of reproduction.

But in all plants the root has these three essential functions.

First, I said, to hold the Plant in its place. The Root is its Fetter.

You think it, perhaps, a matter of course that a plant is not to be a crawling thing ? It is not a matter of course at all. A vegetable might be just what it is now, as compared with an animal ;—might live on earth and water instead of on meat,—might be as senseless in life, as calm in death, and in all its parts and apparent structure unchanged ; and yet be a crawling thing. It is quite as easy to conceive plants moving about like lizards, putting forward first one root and then another, as it is to think of them fastened to their place. It might have been well for them, one would have thought, to have the power

* Learn this word, at any rate ; and if you know any Greek, learn also this group of words : "*ὡς ρίζα ἐν γῇ διψώσῃ*," which you may chance to meet with, and even to think about, some day.

of going down to the streams to drink, in time of drought ;—of migrating in winter with grim march from north to south of Dunsinane Hill side. But that is not their appointed Fate. They are—at least all the noblest of them, rooted to their spot. Their honour and use is in giving immoveable shelter,—in remaining landmarks, or lovemarks, when all else is changed :

“ The cedars wave on Lebanon,
But Judah's statelier maids are gone.”

4. Its root is thus a form of fate to the tree. It condemns, or indulges it, in its place. These semi-living creatures, come what may, shall abide, happy, or tormented. No doubt concerning “ the position in which Providence has placed *them*,” is to trouble their minds, except so far as they can mend it by seeking light, or shrinking from wind, or grasping at support, within certain limits. In the thoughts of men they have thus become twofold images,—on the one side, of spirits restrained and half destroyed, whence the fables of transformation into trees ; on the other, of spirits patient and continuing, having root in themselves and in good ground, capable of all persistent effort and vital stability, both in themselves, and for the human States they form.

5. In this function of holding fast, roots have a power of grasp quite different from that of branches. It is not a grasp, or clutch by contraction, as that of a bird's claw, or of the small branches we call ‘tendrils’ in climbing plants. It is a dead, clumsy, but inevitable grasp, by swelling, *after* contortion. For there is this main difference between a branch and root, that a branch cannot grow vividly but in certain directions and relations to its neighbour branches ; but a root can grow wherever there is earth, and can turn in any direction to avoid an obstacle.*

* “ Duhamel, botanist of the last century, tells us that, wishing to preserve a field of good land from the roots of an avenue of elms which were exhausting it, he cut a ditch between the field and avenue to intercept the roots. But he saw with surprise those of the roots which had not been cut, go down behind the slope of the ditch to keep out of

6. In thus contriving access for itself where it chooses, a root contorts itself into more serpent-like writhing than branches can; and when it has once coiled partly round a rock, or stone, it grasps it tight, necessarily, merely by swelling. Now a root has force enough sometimes to split rocks, but not to crush them; so it is compelled to grasp by flattening as it thickens; and, as it must have room somewhere, it alters its own shape as if it were made of dough, and holds the rock, not in a claw, but in a wooden cast or mould, adhering to its surface. And thus it not only finds its anchorage in the rock, but binds the rocks of its anchorage with a constrictor cable.

7. Hence—and this is a most important secondary function—roots bind together the ragged edges of rocks as a hem does the torn edge of a dress: they literally stitch the stones together; so that, while it is always dangerous to pass under a treeless edge of overhanging crag, as soon as it has become beautiful with trees, it is safe also. The rending power of roots on rocks has been greatly overrated. Capillary attraction in a willow wand will indeed split granite, and swelling roots sometimes heave considerable masses aside, but on the whole, roots, small and great, bind, and do not rend.* The surfaces of mountains are dissolved and disordered, by rain, and frost, and chemical decomposition, into mere heaps of loose stones on their desolate summits; but, where the forests grow, soil accumulates and disintegration ceases. And by cutting down forests on great mountain slopes, not only is the climate destroyed, but the danger of superficial landslip fearfully increased.

8. The second function of roots is to gather for the plant the nourishment it needs from the ground. This is partly water, mixed with some kinds of air (ammonia, etc.,) but the

the light, go under the ditch, and into the field again." And the Swiss naturalist Bonnet said wittily, apropos of a wonder of this sort, "that sometimes it was difficult to distinguish a cat from a rosebush."

* As the first great office of the mosses is the gathering of earth, so that of the grasses is the binding of it. Theirs the Enchanter's toil, not in vain,—making ropes out of sea-sand.

plant can get both water and ammonia from the atmosphere ; and, I believe, for the most part does so ; though, when it cannot get water from the air, it will gladly drink by its roots. But the things it cannot receive from the air at all are certain earthy salts, essential to it (as iron is essential in our own blood), and of which when it has quite exhausted the earth, no more such plants can grow in that ground. On this subject you will find enough in any modern treatise on agriculture ; all that I want you to note here is that this feeding function of the root is of a very delicate and discriminating kind, needing much searching and mining among the dust, to find what it wants. If it only wanted water, it could get most of that by spreading in mere soft senseless limbs, like sponge, as far, and as far down, as it could—but to get the *salt* out of the earth it has to *sift* all the earth, and taste and touch every grain of it that it can, with fine fibres. And therefore a root is not at all a merely passive sponge or absorbing thing, but an infinitely subtle tongue, or tasting and eating thing. That is why it is always so fibrous and divided and entangled in the clinging earth.

9. "Always fibrous and divided"? But many roots are quite hard and solid !

No ; the active part of the root is always, I believe, a fibre. But there is often a provident and passive part—a savings bank of root—in which nourishment is laid up for the plant, and which, though it may be underground, is no more to be considered its real root than the kernel of a seed is. When you sow a pea, if you take it up in a day or two, you will find the fibre below, which is root ; the shoot above, which is plant : and the pea as a now partly exhausted storehouse, looking very woful, and like the granaries of Paris after the fire. So the round solid root of a cyclamen, or the conical one which you know so well as a carrot, are not properly roots, but permanent storehouses,—only the fibres that grow from them are roots. Then there are other apparent roots which are not even storehouses, but refuges ; houses where the little plant lives in its infancy, through winter and rough weather. So that it will be best for you at once to limit your idea of a root to this,—

that it is a group of growing fibres which taste and suck what is good for the plant out of the ground, and by their united strength hold it in its place: only remember the thick limbs of roots do not feed, but only the fine fibres at the ends of them which are something between tongues and sponges, and while they absorb moisture readily, are yet as particular about getting what they think nice to eat as any dainty little boy or girl; looking for it everywhere, and turning angry and sulky if they don't get it.

10. But the root has, it seems to me, one more function, the most important of all. I say, it seems to me, for observe, what I have hitherto told you is all (I believe) ascertained and admitted; this that I am going to tell you has not yet, as far as I know, been asserted by men of science, though I believe it to be demonstrable. But you are to examine into it, and think of it for yourself.

There are some plants which appear to derive all their food from the air—which need nothing but a slight grasp of the ground to fix them in their place. Yet if we were to tie them into that place, in a framework, and cut them from their roots, they would die. Not only in these, but in all other plants, the vital power by which they shape and feed themselves, whatever that power may be, depends, I think, on that slight touch of the earth, and strange inheritance of its power. It is as essential to the plant's life as the connection of the head of an animal with its body by the spine is to the animal. Divide the feeble nervous thread, and all life ceases. Nay, in the tree the root is even of greater importance. You will not kill the tree, as you would an animal, by dividing its body or trunk. The part not severed from the root will shoot again. But in the root, and its touch of the ground, is the life of it. My own definition of a plant would be "a living creature whose source of vital energy is in the earth" (or in the water, as a form of the earth; that is, in inorganic substance). There is, however, one tribe of plants which seems nearly excepted from this law. It is a very strange one, having long been noted for the resemblance of its flowers to different insects; and it has recently been proved by Mr. Darwin to be depend-

ent on insects for its existence. Doubly strange therefore, it seems, that in some cases this race of plants all but reaches the independent life of insects. It rather *settles* upon boughs than roots itself in them ; half of its roots may wave in the air.

11. What vital power is, men of science are not a step nearer knowing than they were four thousand years ago. They are, if anything, farther from knowing now than then, in that they imagine themselves nearer. But they know more about its limitations and manifestations than they did. They have even arrived at something like a proof that there is a fixed quantity of it flowing out of things and into them. But, for the present, rest content with the general and sure knowledge that, fixed or flowing, measurable or immeasurable—one with electricity or heat or light, or quite distinct from any of them—life is a delightful, and its negative, death, a dreadful thing, to human creatures ; and that you can give or gather a certain quantity of life into plants, animals, and yourself by wisdom and courage, and by their reverses can bring upon them any quantity of death you please, which is a much more serious point for you to consider than what life and death are.

12. Now, having got a quite clear idea of a root properly so called, we may observe what those storehouses, refuges, and ruins are, which we find connected with roots. The greater number of plants feed and grow at the same time ; but there are some of them which like to feed first and grow afterwards. For the first year, or, at all events, the first period of their life, they gather material for their future life out of the ground and out of the air, and lay it up in a storehouse as bees make combs. Of these stores—for the most part rounded masses tapering downwards into the ground—some are as good for human beings as honeycombs are ; only not so sweet. We steal them from the plants, as we do from the bees, and these conical upside-down hives or treasuries of Atreus, under the names of carrots, turnips, and radishes, have had important influence on human fortunes. If we do not steal the store, next year the plant lives upon it, raises its stem, flowers and seeds out of that abundance, and having fulfilled its destiny, and provided for its successor, passes away, root and branch together.

13. There is a pretty example of patience for us in this; and it would be well for young people generally to set themselves to grow in a carrotty or turnippy manner, and lay up secret store, not caring to exhibit it until the time comes for fruitful display. But they must not, in after-life, imitate the spendthrift vegetable, and blossom only in the strength of what they learned long ago; else they soon come to contemptible end. Wise people live like laurels and cedars, and go on mining in the earth, while they adorn and embalm the air.

14. Secondly, Refuges. As flowers growing on trees have to live for some time, when they are young in their buds, so some flowers growing on the ground have to live for a while, when they are young, in what we call their roots. These are mostly among the Drosidæ* and other humble tribes, loving the ground; and, in their babyhood, liking to live quite down in it. A baby crocus has literally its own little dome—domus, or duomo—within which in early spring it lives a delicate convent life of its own, quite free from all worldly care and dangers, exceedingly ignorant of things in general, but itself brightly golden and perfectly formed before it is brought out. These subterranean palaces and vaulted cloisters, which we call bulbs, are no more roots than the blade of grass is a root, in which the ear of corn forms before it shoots up.

15. Thirdly, Ruins. The flowers which have these subterranean homes form one of many families whose roots, as well as seeds, have the power of reproduction. The succession of some plants is trusted much to their seeds: a thistle sows itself by its down, an oak by its acorns; the companies of flying emigrants settle where they may; and the shadowy tree is content to cast down its showers of nuts for swine's food with the chance that here and there one may become a ship's bulwark. But others among plants are less careless, or less proud. Many are anxious for their children to grow in the place where they grew themselves, and secure this not merely by letting their fruit fall at their feet, on the chance of its

* Drosidæ, in our school nomenclature, is the general name, including the four great tribes, iris, asphodel, amaryllis, and lily. See reason for this name given in the 'Queen of the Air,' Section II.

growing up beside them, but by closer bond, bud springing forth from root, and the young plant being animated by the gradually surrendered life of its parent. Sometimes the young root is formed above the old one, as in the crocus, or beside it, as in the amaryllis, or beside it in a spiral succession, as in the orchis ; in these cases the old root always perishes wholly when the young one is formed ; but in a far greater number of tribes, one root connects itself with another by a short piece of intermediate stem ; and this stem does not at once perish when the new root is formed, but grows on at one end indefinitely, perishing slowly at the other, the scars or ruins of the past plants being long traceable on its sides. When it grows entirely underground it is called a root-stock. But there is no essential distinction between a root-stock and a creeping stem, only the root-stock may be thought of as a stem which shares the melancholy humour of a root in loving darkness, while yet it has enough consciousness of better things to grow towards, or near, the light. In one family it is even fragrant where the flower is not, and a simple house-leek is called '*rhodiola rosea*,' because its root-stock has the scent of a rose.

16. There is one very unusual condition of the root-stock which has become of much importance in economy, though it is of little in botany ; the forming, namely, of knots at the ends of the branches of the underground stem, where the new roots are to be thrown out. Of these knots, or '*tubers*,' (swollen things,) one kind, belonging to the tobacco tribe, has been singularly harmful, together with its pungent relative, to a neighbouring country of ours, which perhaps may reach a higher destiny than any of its friends can conceive for it, if it can ever succeed in living without either the potato, or the pipe.

17. Being prepared now to find among plants many things which are like roots, yet are not ; you may simplify and make fast your true idea of a root as a fibre or group of fibres, which fixes, animates, and partly feeds the leaf. Then practically, as you examine plants in detail, ask first respecting them : What kind of root have they ? Is it large or small in

proportion to their bulk, and why is it so? What soil does it like, and what properties does it acquire from it? The endeavour to answer these questions will soon lead you to a rational inquiry into the plant's history. You will first ascertain what rock or earth it delights in, and what climate and circumstances; then you will see how its root is fitted to sustain it mechanically under given pressures and violences, and to find for it the necessary sustenance under given difficulties of famine or drought. Lastly you will consider what chemical actions appear to be going on in the root, or its store; what processes there are, and elements, which give pungency to the radish, flavour to the onion, or sweetness to the liquorice; and of what service each root may be made capable under cultivation, and by proper subsequent treatment, either to animals or men.

18. I shall not attempt to do any of this for you; I assume, in giving this advice, that you wish to pursue the science of botany as your chief study; I have only broken moments for it, snatched from my chief occupations, and I have done nothing myself of all this I tell you to do. But so far as you can work in this manner, even if you only ascertain the history of one plant, so that you know that accurately, you will have helped to lay the foundation of a true science of botany, from which the mass of useless nomenclature,* now mistaken for science, will fall away, as the husk of a poppy falls from the bursting flower.

CHAPTER III.

THE LEAF.

1. In the first of the poems of which the English Government has appointed a portion to be sung every day for the in-

* The only use of a great part of our existing nomenclature is to enable one botanist to describe to another a plant which the other has not seen. When the science becomes approximately perfect, all known plants will be properly figured, so that nobody need describe them; and unknown plants be so rare that nobody will care to learn a new and difficult language, in order to be able to give an account of what in all probability he will never see.

struction and pleasure of the people, there occurs this curious statement respecting any person who will behave himself rightly: "He shall be like a tree planted by the river side, that bears its fruit in its season. His leaf also shall not wither; and you will see that whatever he does will prosper."

I call it a curious statement, because the conduct to which this prosperity is promised is not that which the English, as a nation, at present think conducive to prosperity: but whether the statement be true or not, it will be easy for you to recollect the two eastern figures under which the happiness of the man is represented,—that he is like a tree bearing fruit "in its season;" (not so hastily as that the frost pinch it, nor so late that no sun ripens it;) and that "his leaf shall not fade." I should like you to recollect this phrase in the Vulgate—"folium ejus non defluet"—shall not fall *away*,—that is to say, shall not fall so as to leave any visible bareness in winter time, but only that others may come up in its place, and the tree be always green.

2. Now, you know, the fruit of the tree is either for the continuance of its race, or for the good, or harm, of other creatures. In no case is it a good to the tree itself. It is not indeed, properly, a part of the tree at all, any more than the egg is part of the bird, or the young of any creature part of the creature itself. But in the leaf is the strength of the tree itself. Nay, rightly speaking, the leaves *are* the tree itself. Its trunk sustains; its fruit burdens and exhausts; but in the leaf it breathes and lives. And thus also, in the eastern symbolism, the fruit is the labour of men for others; but the leaf is their own life. "He shall bring forth fruit, in his time; and his own joy and strength shall be continual."

3. Notice next the word 'folium.' In Greek, *φυλλον*, 'phyllon.'

"The thing that is born," or "put forth." "When the branch is tender, and putteth forth her leaves, ye know that summer is nigh." The botanists say, "The leaf is an expansion of the bark of the stem." More accurately, the bark is a contraction of the tissue of the leaf. For every leaf is born out of the earth, and breathes out of the air; and there are

many leaves that have no stems, but only roots. It is 'the springing thing'; this thin film of life; rising, with its *edge* out of the ground—infinately feeble, infinitely fair. With *Folium*, in Latin, is rightly associated the word *Flos*; for the flower is only a group of singularly happy leaves. From these two roots come *foglio*, *feuille*, *feuillage*, and *fleur*;—*blume*, blossom, and bloom; our foliage, and the borrowed foil, and the connected technical groups of words in architecture and the sciences.

4. This *thin* film, I said. That is the essential character of a leaf; to be thin,—widely spread out in proportion to its mass. It is the opening of the substance of the earth to the air, which is the giver of life. The Greeks called it, therefore, not only the born or blooming thing, but the spread or expanded thing—"πεταλον." Pindar calls the beginnings of quarrel, "petals of quarrel." Recollect, therefore, this form, *Petalos*; and connect it with *Petasos*, the expanded cap of Mercury. For one great use of both is to give shade. The root of all these words is said to be *PIET* (*Pet*), which may easily be remembered in Greek, as it sometimes occurs in no unpleasant sense in English.

5. But the word 'petalos' is connected in Greek with another word, meaning to fly,—so that you may think of a bird as spreading its petals to the wind; and with another, signifying Fate in its pursuing flight, the overtaking thing, or overflying Fate. Finally, there is another Greek word meaning 'wide,' *πλατυς* (*platys*); whence at last our 'plate'—a thing made broad or extended—but especially made broad or 'flat' out of the solid, as in a lump of clay extended on the wheel, or a lump of metal extended by the hammer. So the first we call Platter; the second Plate, when of the precious metals. Then putting *b* for *p*, and *d* for *t*, we get the blade of an oar, and blade of grass.

6. Now gather a branch of laurel, and look at it carefully. You may read the history of the being of half the earth in one of those green oval leaves—the things that the sun and the rivers have made out of dry ground. Daphne—daughter of Enipeus, and beloved by the Sun,—that fable gives you at

once the two great facts about vegetation. Where warmth is, and moisture—there also, the leaf. Where no warmth—there is no leaf ; where there is no dew—no leaf.

7. Look, then, to the branch you hold in your hand. That you *can* so hold it, or make a crown of it, if you choose, is the first thing I want you to note of it ;—the proportion of size, namely, between the leaf and *you*. Great part of your life and character, as a human creature, has depended on that. Suppose all leaves had been spacious, like some palm leaves ; solid, like cactus stem ; or that trees had grown, as they might of course just as easily have grown, like mushrooms, all one great cluster of leaf round one stalk. I do not say that they are divided into small leaves only for your delight, or your service, as if you were the monarch of everything—even in this atom of a globe. You are made of your proper size ; and the leaves of theirs : for reasons, and by laws, of which neither the leaves nor you know anything. Only note the harmony between both, and the joy we may have in this division and mystery of the frivolous and tremulous petals, which break the light and the breeze,—compared to what, with the frivolous and the tremulous mind which is in us, we could have had out of domes, or penthouses, or walls of leaf.

8. Secondly ; think awhile of its dark clear green, and the good of it to you. Scientifically, you know green in leaves is owing to 'chlorophyll,' or, in English, to 'green-leaf.' It may be very fine to know that ; but my advice to you, on the whole, is to rest content with the general fact that leaves are green when they do not grow in or near smoky towns ; and not by any means to rest content with the fact that very soon there will not be a green leaf in England, but only greenish-black ones. And thereon resolve that you will yourself endeavour to promote the growing of the green wood, rather than of the black.

9. Looking at the back of your laurel-leaves, you see how the central rib or spine of each, and the lateral branchings, strengthen and carry it. I find much confused use, in botanical works, of the words Vein and Rib. For, indeed, there are veins *in* the ribs of leaves, as marrow in bones ; and the pro-



PLATE II.—CENTRAL TYPE OF LEAVES. COMMON BAY LAUREL.

1. The first part of the document is a list of the names of the persons who were present at the meeting.

jecting bars often gradually depress themselves into a transparent net of rivers. But the *mechanical* force of the framework in carrying the leaf-tissue is the point first to be noticed ; it is that which admits, regulates, or restrains the visible motions of the leaf ; while the system of circulation can only be studied through the microscope. But the ribbed leaf bears itself to the wind, as the webbed foot of a bird does to the water, and needs the same kind, though not the same strength, of support ; and its ribs always are partly therefore constituted of strong woody substance, which is knit out of the tissue ; and you can extricate this skeleton framework, and keep it, after the leaf-tissue is dissolved. So I shall henceforward speak simply of the leaf and its ribs,—only specifying the additional veined structure on necessary occasions.

10. I have just said that the ribs—and might have said, farther, the stalk that sustains them—are knit out of the *tissue* of the leaf. But what is the leaf tissue itself knit out of ? One would think that was nearly the first thing to be discovered, or at least to be thought of, concerning plants,—namely, how and of what they are made. We say they ‘grow.’ But you know that they can’t grow out of nothing ;—this solid wood and rich tracery must be made out of some previously existing substance. What is the substance?—and how is it woven into leaves,—twisted into wood ?

11. Consider how fast this is done, in spring. You walk in February over a slippery field, where, through hoar-frost and mud, you perhaps hardly see the small green blades of trampled turf. In twelve weeks you wade through the same field up to your knees in fresh grass ; and in a week or two more, you mow two or three solid haystacks off it. In winter you walk by your currant-bush, or your vine. They are shrivelled sticks—like bits of black tea in the canister. You pass again in May, and the currant-bush looks like a young sycamore tree ; and the vine is a bower : and meanwhile the forests, all over this side of the round world, have grown their foot or two in height, with new leaves—so much deeper, so much denser than they were. Where has it all come from ? Cut off the fresh shoots from a single branch of

any tree in May. Weigh them ; and then consider that so much weight has been added to every such living branch, everywhere, this side the equator, within the last two months. What is all that made of ?

12. Well, this much the botanists really know, and tell us,—It is made chiefly of the breath of animals ; that is to say, of the substance which, during the past year, animals have breathed into the air ; and which, if they went on breathing, and their breath were not made into trees, would poison them, or rather suffocate them, as people are suffocated in uncleansed pits, and dogs in the Grotta del Cane. So that you may look upon the grass and forests of the earth as a kind of green hoar-frost, frozen upon it from our breath, as, on the window-panes, the white arborescence of ice.

13. But how is it made into wood ?

The substances that have been breathed into the air are charcoal, with oxygen and hydrogen,—or, more plainly, charcoal and water. Some necessary earths,—in smaller quantity, but absolutely essential,—the trees get from the ground ; but, I believe all the charcoal they want, and most of the water, from the air. Now the question is, where and how do they take it in, and digest it into wood ?

14. You know, in spring, and partly through all the year, except in frost, a liquid called 'sap' circulates in trees, of which the nature, one should have thought, might have been ascertained by mankind in the six thousand years they have been cutting wood. Under the impression always that it *had been* ascertained, and that I could at any time know all about it, I have put off till to-day, 19th October, 1869, when I am past fifty, the knowing anything about it at all. But I will really endeavour now to ascertain something, and take to my botanical books, accordingly, in due order.

(1) Dresser's "Rudiments of Botany." 'Sap' not in the index ; only Samara, and Sarcocarp,—about neither of which I feel the smallest curiosity. (2) Figuier's "Histoire des Plantes."* 'Sève,' not in index ; only Serpolet, and *Sherardia arvensis*, which also have no help in them for me.

* An excellent book, nevertheless.

(3) Balfour's "Manual of Botany." 'Sap,'—yes, at last. "Article 257. Course of fluids in exogenous stems." I don't care about the course just now: I want to know where the fluids come from. "If a plant be plunged into a weak solution of acetate of lead,"—I don't in the least want to know what happens. "From the minuteness of the tissue, it is not easy to determine the vessels through which the sap moves." Who said it was? If it had been easy, I should have done it myself. "Changes take place in the composition of the sap in its upward course." I dare say; but I don't know yet what its composition is before it begins going up. "The Elaborated Sap by Mr. Schultz has been called 'latex.'" I wish Mr. Schultz were in a hogshead of it, with the top on. "On account of these movements in the latex, the laticiferous vessels have been denominated cinenchymatous." I do not venture to print the expressions which I here mentally make use of.

15. Stay,—here, at last, in Article 264, is something to the purpose: "It appears then that, in the case of Exogenous plants, the fluid matter in the soil, containing different substances in solution, is sucked up by the extremities of the roots." Yes, but how of the pine trees on yonder rock?—Is there any sap in the rock, or water either? The moisture must be seized during actual rain on the root, or stored up from the snow; stored up, any way, in a tranquil, not actively sappy, state, till the time comes for its change, of which there is no account here.

16. I have only one chance left now. Lindley's "Introduction to Botany." 'Sap,'—yes,—'General motion of.' II. 325. "The course which is taken by the sap, after entering a plant, is the first subject for consideration." My dear doctor, I have learned nearly whatever I know of plant structure from you, and am grateful; and that it is little, is not your fault, but mine. But this—let me say it with all sincere respect—is not what you should have told me here. You know, far better than I, that 'sap' never does enter a plant at all; but only salt, or earth and water, and that the roots alone could not make it; and that, therefore, the course of it must be, in great part, the result or process of the actual making. But I

will read now, patiently ; for I know you will tell me much that is worth hearing, though not perhaps what I want.

Yes ; now that I have read Lindley's statement carefully, I find it is full of precious things ; and this is what, with thinking over it, I can gather for you.

17. First, towards the end of January,—as the light enlarges, and the trees revive from their rest,—there is a general liquefaction of the blood of St. Januarius in their stems ; and I suppose there is really a great deal of moisture rapidly absorbed from the earth in most cases ; and that this absorption is a great help to the sun in drying the winter's damp out of it for us : then, with that strange vital power,—which scientific people are usually as afraid of naming as common people are afraid of naming Death,—the tree gives the gathered earth and water a changed existence ; and to this new-born liquid an upward motion from the earth, as our blood has from the heart ; for the life of the tree is out of the earth ; and this upward motion has a mechanical power in pushing on the growth. “*Forced onward* by the current of sap, the plumule ascends,” (Lindley, p. 132,)—this blood of the tree having to supply, exactly as our own blood has, not only the forming powers of substance, but a continual evaporation, “approximately seventeen times more than that of the human body,” while the force of motion in the sap “is sometimes five times greater than that which impels the blood in the crural artery of the horse.”

18. Hence generally, I think we may conclude thus much,—that at every pore of its surface, under ground and above, the plant in the spring absorbs moisture, which instantly disperses itself through its whole system “by means of some permeable quality of the membranes of the cellular tissue invisible to our eyes even by the most powerful glasses” (p. 326) ; that in this way subjected to the vital power of the tree, it becomes sap, properly so called, which passes downwards through this cellular tissue, slowly and secretly ; and then upwards, through the great vessels of the tree, violently, stretching out the supple twigs of it as you see a flaccid waterpipe swell and move when the cock is turned to fill it. And the

tree becomes literally a fountain, of which the springing streamlets are clothed with new-woven garments of green tissue, and of which the silver spray stays in the sky,—a spray, now, of leaves.

19. That is the gist of the matter ; and a very wonderful gist it is, to my mind. The secret and subtle descent—the violent and exulting resilience of the tree's blood,—what guides it ?—what compels ? The creature has no heart to beat like ours ; one cannot take refuge from the mystery in a 'muscular contraction.' Fountain without supply—playing by its own force, for ever rising and falling all through the days of Spring, spending itself at last in gathered clouds of leaves, and iris of blossom.

Very wonderful ; and it seems, for the present, that we know nothing whatever about its causes ; nay, the strangeness of the reversed arterial and vein motion, without a heart, does not not seem to strike anybody. Perhaps, however, it may interest you, as I observe it does the botanists, to know that the cellular tissue through which the motion is effected is called Parenchym, and the woody tissue, Bothrenchym ; and that Parenchym is divided, by a system of nomenclature which "has some advantages over that more commonly in use," * into merenchyma, conenchyma, ovenchyma, atractenchyma, cylindrenchyma, colpenchyma, cladenchyma, and prismenchyma.

20. Take your laurel branch into your hand again. There are, as you must well know, innumerable shapes and orders of leaves ;—there are some like claws ; some like fingers, and some like feet ; there are endlessly cleft ones, and endlessly clustered ones, and inscrutable divisions within divisions of the fretted verdure ; and wrinkles, and ripples, and stitchings, and hemmings, and pinchings, and gatherings, and crumplings, and clippings, and what not. But there is nothing so constantly noble as the pure leaf of the laurel, bay, orange, and olive ; numerable, sequent, perfect in setting,

* Lindley, 'Introduction to Botany,' vol. i., p. 21. The terms "wholly obsolete" says an authoritative botanic friend. Thank Heaven !

divinely simple and serene. I shall call these noble leaves 'Apolline' leaves. They characterize many orders of plants, great and small,—from the magnolia to the myrtle, and exquisite 'myrtile' of the hills, (bilberry); but wherever you find them, strong, lustrous, dark green, simply formed, richly scented or stored,—you have nearly always kindly and lovely vegetation, in healthy ground and air.

21. The gradual diminution in rank beneath the Apolline leaf, takes place in others by the loss of one or more of the qualities above named. The Apolline leaf, I said, is strong, lustrous, full in its green, rich in substance, simple in form. The inferior leaves are those which have lost strength, and become thin, like paper; which have lost lustre, and become dead by roughness of surface, like the nettle,—(an Apolline leaf may become dead by *bloom*, like the olive, yet not lose beauty); which have lost colour and become feeble in green, as in the poplar, or *crudely* bright, like rice; which have lost substance and softness, and have nothing to give in scent or nourishment; or become flinty or spiny; finally, which have lost simplicity, and become cloven or jagged. Many of these losses are partly atoned for by gain of some peculiar loveliness. Grass and moss, and parsley and fern, have each their own delightfulness; yet they are all of inferior power and honour, compared to the Apolline leaves.

22. You see, however, that though your laurel leaf has a central stem, and traces of ribs branching from it, in a vertebrated manner, they are so faint that we cannot take it for a type of vertebrate structure. But the two figures of elm and alisma leaf, given in *Modern Painters* (vol. iii.), and now here repeated, Fig. 3, will clearly enough show the opposition between this vertebrate form, branching again usually at the edges, *a*, and the softly opening lines diffused at the stem, and gathered at the point of the leaf, *b*, which, as you almost without doubt know already, are characteristic of a vast group of plants, including especially all the lilies, grasses, and palms, which for the most part are the signs of local or temporary moisture in hot countries;—local, as of fountains and streams; temporary, as of rain or inundation.

But temporary, still more definitely in the day, than in the year. When you go out, delighted, into the dew of the morning, have you ever considered why it is so rich upon the grass ; —why it is *not* upon the trees ? It *is* partly on the trees, but yet your memory of it will be always chiefly of its gleam upon the lawn. On many trees you will find there is none at all. I cannot follow out here the many inquiries connected with this subject, but, broadly, remember the branched trees are fed chiefly by rain,—the unbranched ones by dew, visible or invisible ; that is to say, at all events by moisture which they



FIG. 3.

can gather for themselves out of the air ; or else by streams and springs. Hence the division of the verse of the song of Moses : " My doctrine shall drop as the rain ; my speech shall distil as the dew : as the *small* rain upon the tender *herb*, and as the showers upon the grass."

23. Next, examining the direction of the veins in the leaf of the *alisma*, *b*, Fig. 3, you see they all open widely, as soon as they can, towards the thick part of the leaf ; and then taper, apparently with reluctance, pushing each other outwards, to the point. If the leaf were a lake of the same shape, and its stem the entering river, the lines of the currents passing through

it would, I believe, be nearly the same as that of the veins in the aquatic leaf. I have not examined the fluid law accurately, and I do not suppose there is more real correspondence than may be caused by the leaf's expanding in every permitted direction, as the water would, with all the speed it can ; but the resemblance is so close as to enable you to fasten the relation of the unbranched leaves to streams more distinctly in your mind,—just as the toss of the palm leaves from their stem may, I think, in their likeness to the springing of a fountain, remind you of their relation to the desert, and their necessity, therein, to life of man and beast.

24. And thus, associating these grass and lily leaves always with fountains, or with dew, I think we may get a pretty general name for them also. You know that Cora, our Madonna of the flowers, was lost in Sicilian Fields : you know, also, that the fairest of Greek fountains, lost in Greece, was thought to rise in a Sicilian islet ; and that the real springing of the noble fountain in that rock was one of the causes which determined the position of the greatest Greek city of Sicily. So I think, as we call the fairest branched leaves 'Apolline,' we will call the fairest flowing ones 'Arethusan.' But remember that the Apolline leaf represents only the central type of land leaves, and is, within certain limits, of a fixed form ; while the beautiful Arethusan leaves, alike in flowing of their lines, change their forms indefinitely,—some shaped like round pools, and some like winding currents, and many like arrows, and many like hearts, and otherwise varied and variable, as leaves ought to be,—that rise out of the waters, and float amidst the pausing of their foam.

25. Brantwood, *Easter Day*, 1875.—I don't like to spoil my pretty sentence, above ; but on reading it over, I suspect I wrote it confusing the water-lily leaf, and other floating ones of the same kind, with the Arethusan forms. But the water-lily and water-ranunculus leaves, and such others, are to the orders of earth-loving leaves what ducks and swans are to birds ; (the swan is the water-lily of birds ;) they are *swimming* leaves ; not properly watery creatures, or able to live under water like fish, (unless when dormant), but just like

birds that pass their lives on the surface of the waves—though they must breathe in the air.

And these natant leaves, as they lie on the water surface, do not want strong ribs to carry them,* but have very delicate ones beautifully branching into the orbéd space, to keep the tissue nice and flat; while, on the other hand, leaves that really have to grow under water, sacrifice their tissue, and keep only their ribs, like coral animals; ('*Ranunculus heterophyllus*,' 'other-leaved Frog-flower,' and its like,) just as, if you keep your own hands too long in water, they shrivel at the finger-ends.

26. So that you must not attach any great botanical importance to the characters of contrasted aspects in leaves, which I wish you to express by the words 'Apolline' and 'Arethusan'; but their mythic importance is very great, and your careful observance of it will help you completely to understand the beautiful Greek fable of Apollo and Daphne. There are indeed several Daphnes, and the first root of the name is far away in another field of thought altogether, connected with the Gods of Light. But etymology, the best of servants, is an unreasonable master; and Professor Max Müller trusts his deep-reaching knowledge of the first ideas connected with the names of Athena and Daphne, too implicitly, when he supposes this idea to be retained in central Greek theology. 'Athena' originally meant only the dawn, among nations who knew nothing of a Sacred Spirit. But the Athena who catches Achilles by the hair, and urges the spear of Diomed, has not, in the mind of Homer, the slightest remaining connection with the mere beauty of daybreak. Daphne chased by Apollo, may perhaps—though I doubt even this much of consistence in the earlier myth—have meant the Dawn pursued by the Sun. But there is no trace whatever of this first idea left in the fable of Arcadia and Thessaly.

27. The central Greek Daphne is the daughter of one of the great *river* gods of Arcadia; her mother is the Earth.

* "You should see the girders on under-side of the Victoria Water-lily, the most wonderful bit of engineering, of the kind, I know of."—('Botanical friend.')

Now Arcadia is the Oberland of Greece ; and the crests of Cyllene, Drymanthus, and Mænalus * surround it, like the Swiss forest cantons, with walls of rock, and shadows of pine. And it divides itself, like the Oberland, into three regions : first, the region of rock and snow, sacred to Mercury and Apollo, in which Mercury's birth on Cyllene, his construction of the lyre, and his stealing the oxen of Apollo, are all expressions of the enchantments of cloud and sound, mingling with the sunshine, on the cliffs of Cyllene.

“ While the mists
Flying, and rainy vapours, call out shapes
And phantoms from the crags and solid earth
As fast as a musician scatters sounds
Out of his instrument.”

Then came the pine region, sacred especially to Pan and Mænalus the son of Lycaon and brother of Callisto ; and you had better remember this relationship carefully, for the sake of the meaning of the constellations of Ursa Major and the Mons Mænalius, and of their wolf and bear traditions ; (compare also the strong impression on the Greek mind of the wild leafiness, nourished by snow, of the Boeotian Cithæron,—“ Oh, thou lake-hollow, full of divine leaves, and of wild creatures, nurse of the snow, darling of Diana,” (Phœnissæ, 801). How wild the climate of this pine region is, you may judge from the pieces in the note below † out of

* Roughly, Cyllene 7,700 feet high ; Erymanthus 7,000 ; Mænalus 6,000.

† *March 3rd.*—We now ascend the roots of the mountain called Kastaniá, and begin to pass between it and the mountain of Alonistena, which is on our right. The latter is much higher than Kastaniá, and, like the other peaked summits of the Mænalian range, is covered with firs, and deeply at present with snow. The snow lies also in our pass. At a fountain in the road, the small village of Bazeniko is half a mile on the right, standing at the foot of the Mænalian range, and now covered with snow.

Saetá is the most lofty of the range of mountains, which are in face of Levídhí, to the northward and eastward ; they are all a part of the chain which extends from Mount Khelmós, and connects that great summit with Artemisium, Parthenium, and Parnon. Mount Saetá is cov-

Colonel Leake's diary in crossing the Mænalian range in spring. And then, lastly, you have the laurel and vine region, full of sweetness and Elysian beauty.

28. Now as Mercury is the ruling power of the hill enchantment, so Daphne of the leafy peace. She is, in her first life, the daughter of the mountain river, the mist of it filling the valley; the Sun, pursuing, and effacing it, from dell to dell, is, literally, Apollo pursuing Daphne, and *adverse* to her; (not, as in the earlier tradition, the Sun pursuing only his own light). Daphne, thus hunted, cries to her mother, the Earth, which opens, and receives her, causing the laurel to spring up in her stead. That is to say, wherever the rocks protect the mist from the sunbeam, and suffer it to water the earth, there the laurel and other richest vegetation fill the hollows, giving a better glory to the sun itself. For sunshine, on the torrent spray, on the grass of its valley, and entangled among the laurel stems, or glancing from their leaves, became a thousandfold lovelier and more sacred than the same sunbeams, burning on the leafless mountain-side.

And farther, the leaf, in its connection with the river, is typically expressive, not, as the flower was, of human fading and passing away, but of the perpetual flow and renewal of human mind and thought, rising "like the rivers that run among the hills"; therefore it was that the youth of Greece

ered with firs. The mountain between the plain of Levidhi and Alonistena, or, to speak by the ancient nomenclature, that part of the Mænalian range which separates the Orchomenia from the valleys of Helisson and Methydrium, is clothed also with large forests of the same trees; the road across this ridge from Levidhi to Alonistena is now impracticable on account of the snow.

I am detained all day at Levidhi by a heavy fall of snow, which before the evening has covered the ground to half a foot in depth, although the village is not much elevated above the plain, nor in a more lofty situation than Tripolitza.

March 4th.—Yesterday afternoon and during the night the snow fell in such quantities as to cover all the plains and adjacent mountains; and the country exhibited this morning as fine a snow-scene as Norway could supply. As the day advanced and the sun appeared, the snow melted rapidly, but the sky was soon overcast again, and the snow began to fall.

sacrificed their hair—the sign of their continually renewed strength,—to the rivers, and to Apollo. Therefore, to commemorate Apollo's own chief victory over death—over *Pythia*, the corrupter,—a laurel branch was gathered every year in the vale of Tempe ; and the laurel leaf became the reward or crown of all beneficent and enduring work of man—work of inspiration, born of the strength of the earth, and of the dew of heaven, and which can never pass away.

29. You may doubt at first, even because of its grace, its meaning in the fable of Apollo and Daphne ; you will not doubt it, however, when you trace it back to its first eastern origin. When we speak carelessly of the traditions respecting the Garden of Eden, (or in Hebrew, remember, Garden of Delight,) we are apt to confuse Milton's descriptions with those in the book of Genesis. Milton fills his Paradise with flowers ; but no flowers are spoken of in Genesis. We may indeed conclude that in speaking of every herb of the field, flowers are included. But they are not named. The things that are named in the Garden of Delight are trees only.

The words are, "every tree that was pleasant to the sight and good for food ;" and as if to mark the idea more strongly for us in the Septuagint, even the ordinary Greek word for tree is not used, but the word *ξύλον*,—literally, every 'wood,' every piece of *timber* that was pleasant or good. They are indeed the "*vivi travi*,"—living rafters of Dante's Apennine.

Do you remember how those trees were said to be watered ? Not by the four rivers only. The rivers could not supply the place of rain. No rivers do ; for in truth they are the refuse of rain. No storm-clouds were there, nor hidings of the blue by darkening veil ; but there went up a *mist* from the earth, and watered the face of the ground,—or, as in Septuagint and Vulgate, "There went forth a fountain from the earth, and gave the earth to drink."

30. And now, lastly, we continually think of that Garden of Delight, as if it existed, or could exist, no longer ; wholly forgetting that it is spoken of in Scripture as perpetually existent ; and some of its fairest trees as existent also, or only recently destroyed. When Ezekiel is describing to Pharaoh

the greatness of the Assyrians, do you remember what image he gives of them? "Behold, the Assyrian was a cedar in Lebanon, with fair branches; and his top was among the thick boughs; the waters nourished him, and the deep brought him up, with her rivers running round about his plants. Under his branches did all the beasts of the field bring forth their young; and under his shadow dwelt all great nations."

31. Now hear what follows. "The cedars *in the Garden of God* could not hide *him*. The fir trees were not like his boughs, and the chestnut trees were not like his branches; nor any tree in the Garden of God was like unto him in beauty."

So that you see, whenever a nation rises into consistent, vital, and, through many generations, enduring power, *there* is still the Garden of God; still it is the water of life which feeds the roots of it; and still the succession of its people is imaged by the perennial leafage of trees of Paradise. Could this be said of Assyria, and shall it not be said of England? How much more, of lives such as ours should be,—just, laborious, united in aim, beneficent in fulfilment, may the image be used of the leaves of the trees of Eden! Other symbols have been given often to show the evanescence and slightness of our lives—the foam upon the water, the grass on the house-top, the vapour that vanishes away; yet none of these are images of true human life. That life, when it is real, is *not* evanescent; is *not* slight; does *not* vanish away. Every noble life leaves the fibre of it interwoven for ever in the work of the world; by so much, evermore, the strength of the human race has gained; more stubborn in the root, higher towards heaven in the branch; and, "as a teil tree, and as an oak,—whose substance is in them when they cast their leaves,—so the holy seed is in the midst thereof."

32. Only remember on what conditions. In the great Psalm of life, we are told that everything that a man doeth shall prosper, so only that he delight in the law of his God, that he hath not walked in the counsel of the wicked, nor sat in the seat of the scornful. Is it among these leaves of the perpetual Spring,—helpful leaves for the healing of the na-

tions,—that we mean to have our part and place, or rather among the “brown skeletons of leaves that lag, the forest brook along”? For other leaves there are, and other streams that water them,—not water of life, but water of Acheron. Autumnal leaves there are that strew the brooks, in Vallombrosa. Remember you how the name of the place was changed: “Once called ‘Sweet water’ (Aqua bella), now, the Shadowy Vale.” Portion in one or other name we must choose, all of us, with the living olive, by the living fountains of waters, or with the wild fig trees, whose leafage of human soul is strewed along the brooks of death, in the eternal Vallombrosa.

CHAPTER IV.

THE FLOWER.

ROME, *Whit Monday*, 1874.

1. On the quiet road leading from under the Palatine to the little church of St. Nereo and Achilleo, I met, yesterday morning, group after group of happy peasants heaped in pyramids on their triumphal carts, in Whit-Sunday dress, stout and clean, and gay in colour; and the women all with bright artificial roses in their hair, set with true natural taste, and well becoming them. This power of arranging wreath or crown of flowers for the head, remains to the people from classic times. And the thing that struck me most in the look of it was not so much the cheerfulness, as the dignity;—in a true sense, the *becomingness* and decorousness of the ornament. Among the ruins of the dead city, and the worse desolation of the work of its modern rebuilders, here was one element at least of honour, and order;—and, in these, of delight.

And these are the real significances of the flower itself. It is the utmost purification of the plant, and the utmost discipline. Where its tissue is blanched fairest, dyed purest, set in strictest rank, appointed to most chosen office, there—and created by the fact of this purity and function—is the flower.

2. But created, observe, by the purity and order, more than by the function. The flower exists for its own sake—not

for the fruit's sake. The production of the fruit is an added honour to it—is a granted consolation to us for its death. But the flower is the end of the seed,—not the seed of the flower. You are fond of cherries, perhaps; and think that the use of cherry blossom is to produce cherries. Not at all. The use of cherries is to produce cherry blossoms; just as the use of bulbs is to produce hyacinths,—not of hyacinths to produce bulbs. Nay, that the flower can multiply by bulb, or root, or slip, as well as by seed, may show you at once how immaterial the seed-forming function is to the flower's existence. A flower is to the vegetable substance what a crystal is to the mineral. "Dust of sapphire," writes my friend Dr. John Brown to me, of the wood hyacinths of Scotland in the spring. Yes, that is so,—each bud more beautiful, itself, than perfectest jewel—*this*, indeed, jewel "of purest ray serene;" but, observe you, the glory is in the purity, the serenity, the radiance,—not in the mere continuance of the creature.

3. It is because of its beauty that its continuance is worth Heaven's while. The glory of it is in being,—not in begetting; and in the spirit and substance,—not the change. For the earth also has its flesh and spirit. Every day of spring is the earth's Whit Sunday—Fire Sunday. The falling fire of the rainbow, with the order of its zones, and the gladness of its covenant,—you may eat of it, like Esdras; but you feed upon it only that you may see it. Do you think that flowers were born to nourish the blind?

Fasten well in your mind, then, the conception of order, and purity, as the essence of the flower's being, no less than of the crystal's. A ruby is not made bright to scatter round it child-rubies; nor a flower, but in collateral and added honour, to give birth to other flowers.

Two main facts, then, you have to study in every flower: the symmetry or order of it, and the perfection of its substance; first, the manner in which the leaves are placed for beauty of form; then the spinning and weaving and blanching of their tissue, for the reception of purest colour, or refining to richest surface.

4. First, the order: the proportion, and answering to each other, of the parts; for the study of which it becomes necessary to know what its parts are; and that a flower consists essentially of—Well, I really don't know what it consists essentially of. For some flowers have bracts, and stalks, and toruses, and calices, and corollas, and discs, and stamens, and pistils, and ever so many odds and ends of things besides, of no use at all, seemingly; and others have no bracts, and no stalks, and no toruses, and no calices, and no corollas, and nothing recognizable for stamens or pistils,—only, when they come to be reduced to this kind of poverty, one doesn't call them flowers; they get together in knots, and one calls them catkins, or the like, or forgets their existence altogether;—I haven't the least idea, for instance, myself, what an oak blossom is like; only I know its bracts get together and make a cup of themselves afterwards, which the Italians call, as they do the dome of St. Peter's, 'cupola'; and that is a great pity, for their own sake as well as the world's, that they were not content with their ilex cupolas, which were made to hold something, but took to building these big ones upside-down, which hold nothing—*less* than nothing,—large extinguishers of the flame of Catholic religion. And for farther embarrassment, a flower not only is without essential consistence of a given number of parts, but it rarely consists, alone, of *itself*. One talks of a hyacinth as of a flower; but a hyacinth is any number of flowers. One does not talk of 'a heather'; when one says 'heath,' one means the whole plant, not the blossom,—because heath-bells, though they grow together for company's sake, do so in a voluntary sort of way, and are not fixed in their places; and yet, they depend on each other for effect, as much as a bunch of grapes.

5. And this grouping of flowers, more or less waywardly, is that most subtle part of their order, and the most difficult to represent. Take the cluster of bog-heather bells, for instance, Line-study 1. You might think at first there were no lines in it worth study; but look at it more carefully. There are twelve bells in the cluster. There may be fewer, or more; but the bog-heath is apt to run into something near that

number. They all grow together as close as they can, and on one side of the supporting branch only. The natural effect would be to bend the branch down; but the branch won't have that, and so leans back to carry them. Now you see the use of drawing the profile in the middle figure: it shows you the exactly balanced setting of the group,—not drooping, nor erect; but with a disposition to droop, tossed up by the leaning back of the stem. Then, growing as near as they can to each other, those in the middle get squeezed. Here is another quite special character. Some flowers don't like being squeezed at all (fancy a squeezed convolvulus!); but these heather bells like it, and look all the prettier for it,—not the squeezed ones exactly, by themselves, but the cluster altogether, by their patience.

Then also the outside ones get pushed into a sort of star-shape, and in front show the colour of all their sides, and at the back the rich green cluster of sharp leaves that hold them; all this order being as essential to the plant as any of the more formal structures of the bell itself.

6. But the bog-heath has usually only one cluster of flowers to arrange on each branch. Take a spray of ling (Frontispiece), and you will find that the richest piece of Gothic spire-sculpture would be dull and graceless beside the grouping of the floral masses in their various life. But it is difficult to give the accuracy of attention necessary to see their beauty without drawing them; and still more difficult to draw them in any approximation to the truth before they change. This is indeed the fatallest obstacle to all good botanical work. Flowers, or leaves,—and especially the last,—can only be rightly drawn as they grow. And even then, in their loveliest spring action, they grow as you draw them, and will not stay quite the same creatures for half an hour.

7. I said in my inaugural lectures at Oxford, § 107, that real botany is not so much the description of plants as their biography. Without entering at all into the history of its fruitage, the life and death of the blossom *itself* is always an eventful romance, which must be completely told, if well. The grouping given to the various states of form between bud

and flower is always the most important part of the design of the plant ; and in the modes of its death are some of the most touching lessons, or symbolisms, connected with its existence. The utter loss and far scattered ruin of the cistus and wild rose,—the dishonoured and dark contortion of the convolvulus,—the pale wasting of the crimson heath of Apennine, are strangely opposed by the quiet closing of the brown bells of the ling, each making of themselves a little cross as they die ; and so enduring into the days of winter. I have drawn the faded beside the full branch, and know not which is the more beautiful.

8. This grouping, then, and way of treating each other in their gathered company, is the first and most subtle condition of form in flowers ; and, observe, I don't mean, just now, the appointed and disciplined grouping, but the wayward and accidental. Don't confuse the beautiful consent of the cluster in these sprays of heath with the legal strictness of a foxglove,—though that also has its divinity ; but of another kind. That legal order of blossoming—for which we may wisely keep the accepted name, 'inflorescence,'—is itself quite a separate subject of study, which we cannot take up until we know the still more strict laws which are set over the flower itself.

9. I have in my hand a small red poppy which I gathered on Whit Sunday on the palace of the Cæsars. It is an intensely simple, intensely floral, flower. All silk and flame : a scarlet cup, perfect-edged all round, seen among the wild grass far away, like a burning coal fallen from Heaven's altars. You cannot have a more complete, a more stainless, type of flower absolute ; inside and outside, *all* flower. No sparing of colour anywhere—no outside coarsenesses—no interior secrecies ; open as the sunshine that creates it ; fine-finished on both sides, down to the extremest point of insertion on its narrow stalk ; and robed in the purple of the Cæsars.

Literally so. That poppy scarlet, so far as it could be painted by mortal hand, for mortal King, stays yet, against the sun, and wind, and rain, on the walls of the house of Augustus, a hundred yards from the spot where I gathered the weed of its desolation.

10. A pure *cup*, you remember it is; that much at least you cannot but remember, of poppy-form among the corn-fields; and it is best, in beginning, to think of every flower as essentially a cup. There are flat ones, but you will find that most of these are really groups of flowers, not single blossoms; and there are out-of-the-way and quaint ones, very difficult to define as of any shape; but even these have a cup to begin with, deep down in them. You had better take the idea of a cup or vase, as the first, simplest, and most general form of true flower.

The botanists call it a corolla, which means a garland, or a kind of crown; and the word is a very good one, because it indicates that the flower-cup is made, as our clay cups are, on a potter's wheel; that it is essentially a *revolute* form—a whirl or (botanically) 'whorl' of leaves; in reality successive round the base of the urn they form.

11. Perhaps, however, you think poppies in general are not much like cups. But the flower in my hand is a—poverty-stricken poppy, I was going to write,—poverty-strengthened poppy, I mean. On richer ground, it would have gushed into flaunting breadth of untenable purple—flapped its inconsistent scarlet vaguely to the wind—dropped the pride of its petals over my hand in an hour after I gathered it. But this little rough-bred thing, a Campagna pony of a poppy, is as bright and strong to-day as yesterday. So that I can see exactly where the leaves join or lap over each other; and when I look down into the cup, find it to be composed of four leaves altogether,—two smaller, set within two larger.

12. Thus far (and somewhat farther) I had written in Rome; but now, putting my work together in Oxford, a sudden doubt troubles me, whether all poppies have two petals smaller than the other two. Whereupon I take down an excellent little school-book on botany—the best I've yet found, thinking to be told quickly; and I find a great deal about opium; and, apropos of opium, that the juice of common celandine is of a bright orange colour; and I pause for a bewildered five minutes, wondering if a celandine is a poppy, and how many petals *it* has: going on again—because I must,

without making up my mind, on either question—I am told to “observe the floral receptacle of the Californian genus *Eschscholtzia*.” Now I can’t observe anything of the sort, and I don’t want to ; and I wish California and all that’s in it were at the deepest bottom of the Pacific. Next I am told to compare the poppy and waterlily ; and I can’t do that, neither—though I should like to ; and there’s the end of the article ; and it never tells me whether one pair of petals is always smaller than the other, or not. Only I see it says the corolla has four petals. Perhaps a celandine may be a double poppy, and have eight, I know they’re tiresome irregular things, and I mustn’t be stopped by them ;*—at any rate, my Roman poppy knew what it was about, and had its two couples of leaves in clear subordination, of which at the time I went on to inquire farther, as follows.

13. The next point is, what shape are the petals of ? And that is easier asked than answered ; for when you pull them

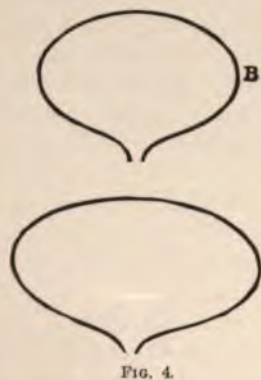


FIG. 4.

off, you find they won't lie flat, by any means, but are each of them cups, or rather shells, themselves ; and that it requires as much conchology as would describe a cockle, before you can properly give account of a single poppy leaf. Or of a single *any* leaf—for all leaves are either shells, or boats, (or solid, if not hollow, masses,) and cannot be represented in flat outline. But, laying these as flat as they will lie on a sheet of paper, you will find the piece they hide of the paper they lie

on can be drawn ; giving approximately the shape of the outer leaf as at A, that of the inner as at B, Fig. 4 ; which you will

* Just in time, finding a heap of gold under an oak tree some thousand years old, near Arundel, I've made them out : Eight divided by three ; that is to say, three couples of petals, with two odd little ones inserted for form's sake. No wonder I couldn't decipher them by memory.

find very difficult lines to draw, for they are each composed of two curves, joined, as in Fig. 5; all above the line *a b* being the outer edge of the leaf, but joined so subtly to the side that the least break in drawing the line spoils the form.

14. Now every flower petal consists essentially of these two parts, variously proportioned and outlined. It expands from *C* to *a b*; and closes in the external line, and for this reason.

Considering every flower under the type of a cup, the first part of the petal is that in which it expands from the bottom to the rim; the second part, that in which it terminates itself on reaching the rim. Thus let the three circles, A B C, Fig.

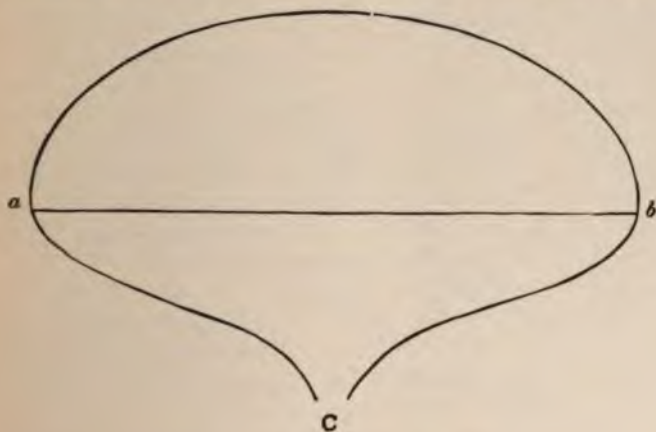


FIG. 5.

6., represent the undivided cups of the three great geometrical orders of flowers—trefoil, quatrefoil and cinquefoil.

Draw in the first an equilateral triangle, in the second a square, in the third a pentagon; draw the dark lines from centres to angles; (D E F): then (*a*) the third part of D; (*b*) the fourth part of E, (*c*) the fifth part of F, are the normal outline forms of the petals of the three families; the relations between the developing angle and limiting curve being varied according to the depth of cup, and the degree of connection between the petals. Thus a rose folds them over one another,

in the bud; a convolvulus twists them,—the one expanding into a flat cinquefoil of separate petals, and the other into a deep-welled cinquefoil of connected ones.

I find an excellent illustration in *Veronica Polita*, one of the most perfectly graceful of field plants because of the light alternate flower stalks, each with its leaf at the base; the flower itself a quatrefoil, of which the largest and least petals are uppermost. Pull one off its calyx (draw, if you can, the outline of the striped blue upper petal with the jagged edge

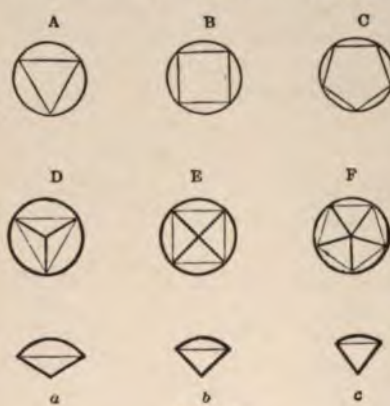


FIG. 6.

of pale gold below), and then examine the relative shapes of the lateral, and least upper petal. Their under surface is very curious, as if covered with white paint; the blue stripes above, in the direction of their growth, deepening the more delicate colour with exquisite insistence.

A lilac blossom will give you a pretty example of the expansion of the

petals of a quatrefoil above the edge of the cup or tube; but I must get back to our poppy at present.

15. What outline its petals really have, however, is little shown in their crumpled fluttering; but that very crumpling arises from a fine floral character which we do not enough value in them. We usually think of the poppy as a coarse flower; but it is the most transparent and delicate of all the blossoms of the field. The rest—nearly all of them—depend on the *texture* of their surfaces for colour. But the poppy is painted *glass*; it never glows so brightly as when the sun shines through it. Wherever it is seen—against the light or with the light—always, it is a flame, and warms the wind like a blown ruby.

In these two qualities, the accurately balanced form, and

the perfectly infused colour of the petals, you have, as I said, the central being of the flower. All the other parts of it are necessary, but we must follow them out in order.

16. Looking down into the cup, you see the green boss divided by a black star,—of six rays only,—and surrounded by a few black spots. My rough-nurtured poppy contents itself with these for its centre; a rich one would have had the green boss divided by a dozen of rays, and surrounded by a dark crowd of crested threads.

This green boss is called by botanists the pistil, which word consists of the two first syllables of the Latin pistillum, otherwise more familiarly Englished into 'pestle.' The meaning of the botanical word is of course, also, that the central part of a flower-cup has to it something of the relations that a pestle has to a mortar! Practically, however, as this pestle has no pounding functions, I think the word is misleading as well as ungraceful; and that we may find a better one after looking a little closer into the matter. For this pestle is divided generally into three very distinct parts: there is a storehouse at the bottom of it for the seeds of the plant; above this, a shaft, often of considerable length in deep cups, rising to the level of their upper edge, or above it; and at the top of these shafts an expanded crest. This shaft the botanists call 'style,' from the Greek word for a pillar; and the crest of it—I do not know why—stigma, from the Greek word for 'spot.' The storehouse for the seeds they call the 'ovary,' from the Latin ovum, an egg. So you have two-thirds of a Latin word, (pistil)—awkwardly and disagreeably edged in between pestle and pistol—for the whole thing; you have an English-Latin word (ovary) for the bottom of it; an English-Greek word (style) for the middle; and a pure Greek word (stigma) for the top.

17. This is a great mess of language, and all the worse that the word style and stigma have both of them quite different senses in ordinary and scholarly English from this forced botanical one. And I will venture therefore, for my own pupils, to put the four names altogether into English. Instead of calling the whole thing a pistil, I shall simply call

it the pillar. Instead of 'ovary,' I shall say 'Treasury' (for a seed isn't an egg, but it *is* a treasure). The style I shall call the 'Shaft,' and the stigma the 'Volute.' So you will have your entire pillar divided into the treasury, at its base, the shaft, and the volute; and I think you will find these divisions easily remembered, and not unfitted to the sense of the words in their ordinary use.

18. Round this central, but, in the poppy, very stumpy, pillar, you find a cluster of dark threads, with dusty pendants or cups at their ends. For these the botanists name 'stamens,' may be conveniently retained, each consisting of a 'filament,' or thread, and an 'anther,' or blossoming part.

And in this rich corolla, and pillar, or pillars, with their treasuries, and surrounding crowd of stamens, the essential flower consists. Fewer than these several parts, it cannot have, to be a flower at all; of these, the corolla leads, and is the object of final purpose. The stamens and the treasuries are only there in order to produce future corollas, though often themselves decorative in the highest degree.

These, I repeat, are all the essential parts of a flower. But it would have been difficult, with any other than the poppy, to have shown you them alone; for nearly all other flowers keep with them, all their lives, their nurse or tutor leaves,—the group which, in stronger and humbler temper, protected them in their first weakness, and formed them to the first laws of their being. But the poppy casts these tutorial leaves away. It is the finished picture of impatient and luxury-loving youth,—at first too severely restrained, then casting all restraint away,—yet retaining to the end of life unseemly and illiberal signs of its once compelled submission to laws which were only pain,—not instruction.

19. Gather a green poppy bud, just when it shows the scarlet line at its side; break it open and unpack the poppy. The whole flower is there complete in size and colour,—its stamens full-grown, but all packed so closely that the fine silk of the petals is crushed into a million of shapeless wrinkles. When the flower opens, it seems a deliverance from torture; the two imprisoning green leaves are shaken to the ground;

the aggrieved corolla smooths itself in the sun, and comforts itself as it can ; but remains visibly crushed and hurt to the end of its days.

20. Not so flowers of gracious breeding. Look at these four stages in the young life of a primrose, Fig. 7. First confined, as strictly as the poppy within five pinching green leaves, whose points close over it, the little thing is content to remain a child, and finds its nursery large enough. The green leaves unclove their points,—the little yellow ones peep out, like ducklings. They find the light delicious, and

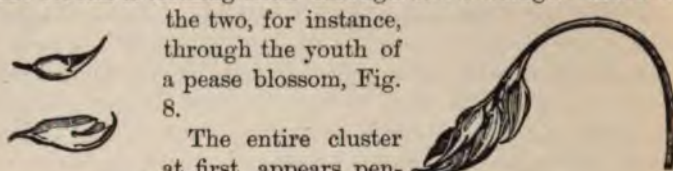


FIG. 7.

open wide to it ; and grow, and grow, and throw themselves wider at last into their perfect rose. But they never leave their old nursery for all that ; it and they live on together ; and the nursery seems a part of the flower.

21. Which is so, indeed, in all the loveliest flowers ; and, in usual botanical parlance, a flower is said to consist of its calyx, (or *hiding* part—Calypso having rule over it,) and corolla, or garland part, Proserpina having rule over it. But it is better to think of them always as separate ; for this calyx, very justly so named from its main function of concealing the flower, in its youth is usually green, not coloured, and

shows its separate nature by pausing, or at least greatly lingering, in its growth, and modifying itself very slightly, while the corolla is forming itself through active change. Look at



the two, for instance, through the youth of a pease blossom, Fig. 8.

The entire cluster at first appears pendent in this manner, the stalk bending round on purpose to put it



FIG. 9.

into that position. On which all the little buds, thinking themselves ill-treated, determine not to submit to anything of the sort, turn their points upward persistently, and determine that—at any cost of trouble—they will get nearer the sun. Then they begin to open, and let out their corollas. I give the process of one only (Fig. 9).^{*} It chanced to be engraved the reverse way from the bud; but that is of no consequence.

At first, you see the long lower point of the calyx thought that *it* was going to be the head of the family, and curls upwards eagerly. Then the little corolla steals out; and soon does away with that impression on the mind of the calyx. The corolla soars up with widening wings, the abashed calyx retreats beneath; and finally the great upper leaf of corolla—not pleased at having its back still turned to the light, and its face down—throws itself entirely back, to look at the sky, and nothing else;—and your blossom is complete.

Keeping, therefore, the ideas of calyx and corolla entirely

^{*} Figs. 8 and 9 are both drawn and engraved by Mr. Burgess.

distinct, this one general point you may note of both ; that, as a calyx is originally folded tight over the flower, and has to open deeply to let it out, it is nearly always composed of sharp pointed leaves like the segments of a balloon ; while corollas having to open out as wide as possible to show themselves, are typically like cups or plates, only cut into their edges here and there, for ornamentation's sake.

22. And, finally, though the corolla is essentially the floral group of leaves, and usually receives the glory of colour for itself only, this glory and delight may be given to any other part of the group ; and, as if to show us that there is no really dishonoured or degraded membership, the stalks and leaves in some plants, near the blossom, flush in sympathy with it, and become themselves a part of the effectively visible flower ; —Eryngo—Jura hyacinth, (comosus,) and the edges of upper stems and leaves in many plants ; while others, (Geranium lucidum,) are made to delight us with their leaves rather than their blossoms ; only I suppose, in these, the scarlet leaf colour is a kind of early autumnal glow,—a beautiful hectic, and foretaste, in sacred youth, of sacred death.

I observe, among the speculations of modern science, several, lately, not uningenious, and highly industrious, on the subject of the relation of colour in flowers, to insects—to selective development, etc., etc. There *are* such relations, of course. So also, the blush of a girl, when she first perceives the faltering in her lover's step as he draws near, is related essentially to the existing state of her stomach ; and to the state of it through all the years of her previous existence. Nevertheless, neither love, chastity, nor blushing, are merely exponents of digestion.

All these materialisms, in their unclean stupidity, are essentially the work of human bats ; men of semi-faculty or semi-education, who are more or less incapable of so much as seeing, much less thinking about, colour ; among whom, for one-sided intensity, even Mr. Darwin must be often ranked, as in his vespertilian treatise on the ocelli of the Argus pheasant, which he imagines to be artistically gradated, and perfectly imitative of a ball and socket. If I had him here in Oxford

for a week, and could force him to try to copy a feather by Bewick, or to draw for himself a boy's thumb'd marble, his notions of feathers, and balls, would be changed for all the rest of his life. But his ignorance of good art is no excuse for the acutely illogical simplicity of the rest of his talk of colour in the "Descent of Man." Peacocks' tails, he thinks, are the result of the admiration of blue tails in the minds of well-bred peahens,—and similarly, mandrills' noses the result of the admiration of blue noses in well-bred baboons. But it never occurs to him to ask why the admiration of blue noses is healthy in baboons, so that it develops their race properly, while similar maidenly admiration either of blue noses or red noses in men would be improper, and develop the race improperly. The word itself 'proper' being one of which he has never asked, or guessed, the meaning. And when he imagined the gradation of the cloudings in feathers to represent successive generation, it never occurred to him to look at the much finer cloudy gradations in the clouds of dawn themselves; and explain the modes of sexual preference and selective development which had brought *them* to their scarlet glory, before the cock could crow thrice. Putting all these vespertilian speculations out of our way, the human facts concerning colour are briefly these. Wherever men are noble, they love bright colour; and wherever they can live healthily, bright colour is given them—in sky, sea, flowers, and living creatures.

On the other hand, wherever men are ignoble and sensual, they endure without pain, and at last even come to like (especially if artists,) mud-colour and black, and to dislike rose-colour and white. And wherever it is unhealthy for them to live, the poisonousness of the place is marked by some ghastly colour in air, earth or flowers.

There are, of course, exceptions to all such widely founded laws; there are poisonous berries of scarlet, and pestilent skies that are fair. But, if we once honestly compare a venomous wood-fungus, rotting into black dissolution of dripped slime at its edges, with a spring gentian; or a puff adder with a salmon trout, or a fog in Bermondsey with a clear sky at Berne, we shall get hold of the entire question on its right

side ; and be able afterwards to study at our leisure, or accept without doubt or trouble, facts of apparently contrary meaning. And the practical lesson which I wish to leave with the reader is, that lovely flowers, and green trees growing in the open air, are the proper guides of men to the places which their maker intended them to inhabit ; while the flowerless and treeless deserts—of reed, or sand, or rock,—are meant to be either heroically invaded and redeemed, or surrendered to the wild creatures which are appointed for them ; happy and wonderful in their wild abodes.

Nor is the world so small but that we may yet leave in it also unconquered spaces of beautiful solitude ; where the chamois and red deer may wander fearless,—nor any fire of avarice scorch from the Highlands of Alp, or Grampian, the rapture of the heath, and the rose.

CHAPTER V.

PAPAVER RHOEAS.

BRANTWOOD, *July 11th*, 1875.

I. CHANCING to take up yesterday a favourite old book, Mavor's *British Tourists*, (London, 1798,) I found in its fourth volume a delightful diary of a journey made in 1782 through various parts of England, by Charles P. Moritz of Berlin.

And in the fourteenth page of this diary I find the following passage, pleasantly complimentary to England :—

“The slices of bread and butter which they give you with your tea are as thin as poppy leaves. But there is another kind of bread and butter usually eaten with tea, which is toasted by the fire, and is incomparably good. This is called ‘toast.’”

I wonder how many people, nowadays, whose bread and butter was cut too thin for them, would think of comparing the slices to poppy leaves? But this was in the old days of travelling, when people did not whirl themselves past corn-fields, that they might have more time to walk on paving-

stones; and understood that poppies did not mingle their scarlet among the gold, without some purpose of the poppy-Maker that they should be looked at.

Nevertheless, with respect to the good and polite German's poetically-contemplated, and finely æsthetic, tea, may it not be asked whether poppy leaves themselves, like the bread and butter, are not, if we may venture an opinion—*too* thin,—*improperly* thin? In the last chapter, my reader was, I hope, a little anxious to know what I meant by saying that modern philosophers did not know the meaning of the word 'proper,' and may wish to know what I mean by it myself. And this I think it needful to explain before going farther.

2. In our English prayer-book translation, the first verse of the ninety-third Psalm runs thus: "The Lord is King; and hath put on glorious apparel." And although, in the future republican world, there are to be no lords, no kings, and no glorious apparel, it will be found convenient, for botanical purposes, to remember what such things once were; for when I said of the poppy, in last chapter, that it was "robed in the purple of the Cæsars," the words gave, to any one who had a clear idea of a Cæsar, and of his dress, a better, and even *stricter*, account of the flower than if I had only said, with Mr. Sowerby, "petals bright scarlet;" which might just as well have been said of a pimpernel, or scarlet geranium;—but of neither of these latter should I have said "robed in purple of Cæsars." What I meant was, first, that the poppy leaf looks dyed through and through, like glass, or Tyrian tissue; and not merely painted: secondly, that the splendour of it is proud,—almost insolently so. Augustus, in his glory, might have been clothed like one of these; and Saul; but not David nor Solomon; still less the teacher of Solomon, when He puts on 'glorious apparel.'

3. Let us look, however, at the two translations of the same verse.

In the vulgate it is "Dominus regnavit; decorem indutus est;" He has put on 'becomingness,'—decent apparel, rather than glorious.

In the Septuagint it is *εὐπρεπείᾳ*—*well-becomingness*; an ex-

pression which, if the reader considers, must imply certainly the existence of an opposite idea of possible 'ill-becomingness,'—of an apparel which should, in just as accurate a sense, belong appropriately to the creature invested with it, and yet not be glorious, but inglorious, and not well-becoming, but ill-becoming. The mandrill's blue nose, for instance, already referred to, can we rightly speak of this as 'εὐπρεπεία' ? Or the stings, and minute, colourless blossoming of the nettle ? May we call these a glorious apparel, as we may the glowing of an alpine rose ?

You will find on reflection, and find more convincingly the more accurately you reflect, that there is an absolute sense attached to such words as 'decent,' 'honourable,' 'glorious,' or 'καλός,' contrary to another absolute sense in the words 'indecent,' 'shameful,' 'vile,' or 'αἰσχυρός.'

And that there is every degree of these absolute qualities visible in living creatures ; and that the divinity of the Mind of man is in its essential discernment of what is καλόν from what is αἰσχυρόν, and in his preference of the kind of creatures which are decent, to those which are indecent ; and of the kinds of thoughts, in himself, which are noble, to those which are vile.

4. When therefore I said that Mr. Darwin, and his school,* had no conception of the real meaning of the word 'proper,' I meant that they conceived the qualities of things only as their 'properties,' but not as their 'becomingnesses ;' and seeing that dirt is proper to a swine, malice to a monkey, poison to a nettle, and folly to a fool, they called a nettle *but* a nettle, and the faults of fools *but* folly ; and never saw the difference between ugliness and beauty absolute, decency and indecency absolute, glory or shame absolute, and folly or sense absolute.

Whereas, the perception of beauty, and the power of defining physical character, are based on moral instinct, and on the power of defining animal or human character. Nor is it possible to say that one flower is more highly developed, or one animal of a higher order, than another, without the assump-

* Of Vespertilian science generally, compare 'Eagles' Nest,' pp. 23 and 126.

tion of a divine law of perfection to which the one more conforms than the other.

5. Thus, for instance. That it should ever have been an



FIG. 10.

open question with me whether a poppy had always two of its petals less than the other two, depended wholly on the hurry and imperfection with which the poppy carries out its plan. It never would have occurred to me to doubt whether an iris had three of its leaves smaller than the other three, because an iris always completes itself to its own ideal. Nevertheless, on examining various poppies, as I walked, this summer, up and down the hills between Sheffield and Wakefield, I find the subordination of the upper and lower petals entirely necessary and normal; and

that the result of it is to give two distinct profiles to the poppy cup, the difference between which, however, we shall see better in the yellow Welsh poppy, at present called *Meconopsis Cambrica*; but which, in the Oxford schools,

will be 'Papaver cruciforme'—'Crosslet Poppy,'—first, because all our botanical names must be in Latin if possible; Greek only allowed when we can do no better; secondly, because meconopsis is barbarous Greek; thirdly, and chiefly, because it is little matter whether this poppy be Welsh or English; but very needful that we should observe, wherever it grows, that the petals are arranged in what used to be, in my young days, called a diamond shape,* as at A, Fig. 10, the two narrow inner ones at right angles to, and projecting farther than, the two outside broad ones; and that the two broad ones, when the flower is seen in profile, as at B, show their margins folded back, as indicated by the thicker lines, and have a profile curve, which is only the softening, or melting away into each other, of two straight lines. Indeed, when the flower is younger, and quite strong, both its profiles, A and B, Fig. 11, are nearly straight-sided; and always, be it young or old, one broader than the other, so as to give the flower, seen from above, the shape of a contracted cross, or crosslet.

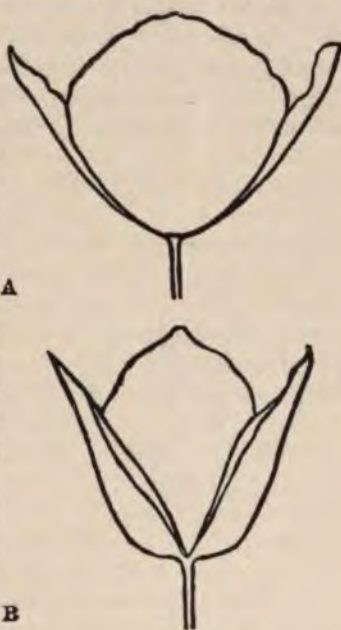


FIG. 11.

6. Now I find no notice of this flower in Gerarde; and in Sowerby, out of eighteen lines of closely printed descriptive text, no notice of its crosslet form, while the petals are only stated to be "roundish-concave," terms equally applicable to at least one-half of all flower petals in the world. The leaves

* The mathematical term is 'rhomb.'

are *said* to be very deeply pinnately partite ; but *drawn*—as neither pinnate nor partite !

And this is your modern cheap science, in ten volumes. Now I haven't a quiet moment to spare for drawing this morning ; but I merely give the main relations of the petals, A, and blot in the wrinkles of one of the lower ones, B, Fig. 12 ; and yet in this rude sketch you will feel, I believe, there is something specific which could not belong to any other flower. But all proper description is impossible without careful profiles of each petal laterally and across it. Which I may not find time to draw for any poppy whatever, because they none



FIG. 12.

of them have well-becomingness enough to make it worth my while, being all more or less weedy, and ungracious, and mingled of good and evil. Whereupon rises before me, ghostly and untenable, the general question, 'What is a weed ?' and, impatient for answer, the particular question, What is a poppy ? I choose, for instance, to call this yellow flower a poppy, instead of a "likeness to poppy," which the botanists meant to call it, in their bad Greek. I choose also to call a poppy, what the botanists have called "glaucous thing," (glaucium). But where and when shall I stop calling things poppies ? This is certainly a question to be settled at once, with others appertaining to it.

7. In the first place, then, I mean to call every flower either one thing or another, and not an 'aceous' thing, only half something or half another. I mean to call this plant now in my hand, either a poppy or not a poppy; but not poppaceous. And this other, either a thistle or not a thistle; but not thistlaceous. And this other, either a nettle or not a nettle; but not nettlaceous. I know it will be very difficult to carry out this principle when tribes of plants are much extended and varied in type: I shall persist in it, however, as far as possible; and when plants change so much that one cannot with any conscience call them by their family name any more, I shall put them aside somewhere among families of poor relations, not to be minded for the present, until we are well acquainted with the better bred circles. I don't know, for instance, whether I shall call the Burnet 'Grass-rose,' or put it out of court for having no petals; but it certainly shall not be called rosaceous; and my first point will be to make sure of my pupils having a clear idea of the central and unquestionable forms of thistle, grass, or rose, and assigning to them pure Latin, and pretty English, names,—classical, if possible? and at least intelligible and decorous.

8. I return to our present special question, then, What is a poppy? and return also to a book I gave away long ago, and have just begged back again, Dr. Lindley's *Ladies' Botany*. For without at all looking upon ladies as inferior beings, I dimly hope that what Dr. Lindley considers likely to be intelligible to *them*, may be also clear to their very humble servant.

The poppies, I find, (page 19, vol. i.) differ from crowfeet in being of a stupefying instead of a burning nature, and in generally having two sepals, and twice two petals, "but as some poppies have three sepals, and twice three petals, the number of these parts is not sufficiently constant to form an essential mark." Yes, I know that, for I found a superb six-petaled poppy, spotted like a cistus, the other day in a friend's garden. But then, what makes it a poppy still? That it is of a stupefying nature, and itself so stupid that it does not know how many petals it should have, is surely not enough distinction?

9. Returning to Lindley, and working the matter farther out with his help, I think this definition might stand : "A poppy is a flower which has either four or six petals, and two or more treasuries, united into one ; containing a milky, stupefying fluid in its stalks and leaves, and always throwing away its calyx when it blossoms."

And indeed, every flower which unites all these characters, we shall, in the Oxford schools, call 'poppy,' and 'Papaver ;' but when I get fairly into work, I hope to fix my definitions into more strict terms. For I wish all my pupils to form the habit of asking, of every plant, these following four questions, in order, corresponding to the subject of these opening chapters, namely, "What root has it? what leaf? what flower? and what stem?" And, in this definition of poppies, nothing whatever is said about the root ; and not only I don't know myself what a poppy root is like, but in all Sowerby's poppy section, I find no word whatever about that matter.

10. Leaving, however, for the present, the root unthought of, and contenting myself with Dr. Lindley's characteristics, I shall place, at the head of the whole group, our common European wild poppy, *Papaver Rhoeas*, and, with this, arrange the nine following other flowers thus,—opposite.

I must be content at present with determining the Latin names for the Oxford schools ; the English ones I shall give as they chance to occur to me, in Gerard and the classical poets who wrote before the English revolution. When no satisfactory name is to be found, I must try to invent one ; as, for instance, just now, I don't like Gerard's 'Corn-rose' for *Papaver Rhoeas*, and must coin another ; but this can't be done by thinking : it will come into my head some day, by chance. I might try at it straightforwardly for a week together, and not do it.

The Latin names must be fixed at once, somehow ; and therefore I do the best I can, keeping as much respect for the old nomenclature as possible, though this involves the illogical practice of giving the epithet sometimes from the flower, (violaceum, cruciforme), and sometimes from the seed vessel, (elatum, echinosum, corniculatum). Guarding this distine-

tion, however, we may perhaps be content to call the six last of the group, in English, Urchin Poppy, Violet Poppy, Crosslet Poppy, Horned Poppy, Beach Poppy, and Welcome Poppy. I don't think the last flower pretty enough to be connected more directly with the swallow, in its English name.

NAME IN OXFORD CATALOGUE.	DIOSCORIDES.	IN PRESENT BOTANY.
1. Papaver Rhoeas	μηκων ροιαν...	Papaver Rhoeas
2. P. Hortense	μ. κηπέυτη.*	P. Hortense
3. P. Elatum	μ. θυλακίτις †.	P. Lamottei
4. P. Argemone		P. Argemone
5. P. Echinops		P. Hybridum
6. P. Violaceum		Roemeria Hybrida
7. P. Cruciforme		Meconopsis Cambrica
8. P. Corniculatum	μ. κερατίτις...	Glaucium Corniculatum
9. P. Littorale	μ. παραλιον...	Glaucium Luteum
10. P. Chelidonium		Chelidonium Majus

11. I shall be well content if my pupils know these ten poppies rightly ; all of them at present wild in our own country, and, I believe, also European in range : the head and type of all being the common wild poppy of our cornfields for which the name 'Papaver Rhoeas,' given it by Dioscorides, Gerarde, and Linnæus, is entirely authoritative, and we will therefore at once examine the meaning, and reason, of that name.

12. Dioscorides says the name belongs to it "διὰ τὸ ταχέως τὸ ἄνθος ἀποβάλλειν," "because it casts off its bloom quickly," from ῥέω, (rheo) in the sense of shedding.† And this indeed it does,—first calyx, then corolla ;—you may translate it 'swiftly ruinous' poppy, but notice, in connection with this idea, how it droops its head *before* blooming : an action which I doubt not, mingled in Homer's thought with the image of its depression when filled by rain, in the passage of the Iliad,

* ἦς τὸ σπέρμα ὀρτοποιεῖται.

† ἐπίωκτες ἔχουσα τὸ κεφάλιον. Dioscorides makes no effort to distinguish species, but gives the different names as if merely used in different places

‡ It is also used sometimes of the garden poppy, says Dioscorides, "διὰ τὸ ῥεῖν ἐξ αὐτῆς τὸν ὀπὸν"—"because the sap, opium, flows from it."

which, as I have relieved your memory of three unnecessary names of poppy families, you have memory to spare for learning.

“μήκων δ' ὥς ἐτέρωσε κάρη βάλεν, ἦτ' ἐνὶ κήπεσσι
καρπῷ βριθομένη, νατῆσι τε εἰδρινῆσιν
ὥς ἐτέρωσ' ἤμυσσε κάρη πῆληκι βαρυθύν.”

“And as a poppy lets its head fall aside, which in a garden is loaded with its fruit, and with the soft rains of spring, so the youth drooped his head on one side ; burdened with the helmet.”

And now you shall compare the translations of this passage, with its context, by Chapman and Pope—(or the school of Pope), the one being by a man of pure English temper, and able therefore to understand pure Greek temper ; the other infected with all the faults of the falsely classical school of the Renaissance.

First I take Chapman :—

“His shaft smit fair Gorgythion, of Præm's princely race
Who in Æpina was brought forth, a famous town in Thrace,
By Castianeira, that for form was like celestial breed
And as a crimson poppy-flower, surcharged with his seed
And vernal humours falling thick, declines his heavy brow,
So, a-oneside, his helmet's weight his fainting head did bow.”

Next, Pope :—

“He missed the mark ; but pierced Gorgythio's heart,
And drenched in royal blood the thirsty dart :
(Fair Castianeira, nymph of form divine,
This offspring added to King Priam's line).
As full-blown poppies, overcharged with rain,
Decline the head, and drooping kiss the plain,
So sinks the youth : his beauteous head, depressed
Beneath his helmet, drops upon his breast.”

13. I give you the two passages in full, trusting that you may so feel the becomingness of the one, and the gracelessness of the other. But note farther, in the Homeric passage, one subtlety which cannot enough be marked even in Chapman's English, that his second word, ἤμυσσε, is employed by

him both of the stooping of ears of corn, under wind, and of Troy stooping to its ruin;* and otherwise, in good Greek writers, the word is marked as having such specific sense of men's drooping under weight; or towards death, under the burden of fortune which they have no more strength to sustain;† compare the passage I quoted from Plato, ('Crown of

* See all the passages quoted by Liddell.

† I find this chapter rather tiresome on re-reading it myself, and cancel some farther criticism of the imitation of this passage by Virgil, one of the few pieces of the *Æneid* which are purely and vulgarly imitative, rendered also false as well as weak by the introducing sentence, "*Vol-vitur Euryalus leto*," after which the simile of the drooping flower is absurd. Of criticism, the chief use of which is to warn all sensible men from such business, the following abstract of Diderot's notes on the passage, given in the '*Saturday Review*' for April 29th, 1871, is worth preserving. (Was the French critic really not aware that Homer *had* written the lines his own way?)

"Diderot illustrates his theory of poetical hieroglyphs by no quotations, but we can show the manner of his minute and sometimes fanciful criticism by repeating his analysis of the passage of Virgil wherein the death of Euryalus is described:

'Pulchrosque per artus
It cruor, inque humeros cervix collapsa recumbit;
Purpureus veluti cum flos succisus aratro
Languescit moriens; lassove papavera collo
Demisere caput, pluvia cum forte gravantur.'

"The sound of '*It cruor*,' according to Diderot, suggests the image of a jet of blood; '*cervix collapsa recumbit*,' the fall of a dying man's head upon his shoulder; '*succisus*' imitates the use of a cutting scythe (not plough); '*demisere*' is as soft as the eye of a flower; '*gravantur*,' on the other hand, has all the weight of a calyx, filled with rain; '*collapsa*' marks an effort and a fall, and similar double duty is performed by '*papavera*,' the first two syllables symbolizing the poppy upright, the last two the poppy bent. While thus pursuing his minute investigations, Diderot can scarcely help laughing at himself, and candidly owns that he is open to the suspicion of discovering in the poem beauties which have no existence. He therefore qualifies his eulogy by pointing out two faults in the passage. '*Gravantur*,' notwithstanding the praise it has received, is a little too heavy for the light head of a poppy, even when filled with water. As for '*aratro*,' coming as it does after the hiss of '*succisus*,' it is altogether abominable. Had Homer written the lines,

Wild Olive,' p. 95): "And bore lightly the burden of gold and of possessions." And thus you will begin to understand how the poppy became in the heathen mind the type at once of power, or pride, and of its loss; and therefore, both why Virgil represents the white nymph Nais, "*pallentes violas, et summa papavera carpens*,"—gathering the pale flags, and the highest poppies,—and the reason for the choice of this rather than any other flower, in the story of Tarquin's message to his son.

14. But you are next to remember the word *Rhoeas* in another sense. Whether originally intended or afterwards caught at, the resemblance of the word to '*Rhoea*,' a pomegranate, mentally connects itself with the resemblance of the poppy head to the pomegranate fruit.

And if I allow this flower to be the first we take up for careful study in '*Proserpina*,' on account of its simplicity of form and splendour of colour, I wish you also to remember, in connection with it, the cause of Proserpine's eternal captivity—her having tasted a pomegranate seed,—the pomegranate being in Greek mythology what the apple is in the Mosaic legend; and, in the whole worship of Demeter, associated with the poppy by a multitude of ideas which are not definitely expressed, but can only be gathered out of Greek art and literature, as we learn their symbolism. The chief character on which these thoughts are founded is the fulness of seed in the poppy and pomegranate, as an image of life: then the forms of both became adopted for beads or bosses in ornamental art; the pomegranate remains more distinctly a Jewish and Christian type, from its use in the border of Aaron's robe, down to the fruit in the hand of Angelico's and Botticelli's Infant Christs; while the poppy is gradually confused by the Byzantine Greeks with grapes; and both of these with

he would have ended with some hieroglyph, which would have continued the hiss or described the fall of a flower. To the hiss of '*succisus*' Diderot is warmly attached. Not by mistake, but in order to justify the sound, he ventures to translate '*aratum*' into '*scythe*,' boldly and rightly declaring in a marginal note that this is not the meaning of the word."

palm fruit. The palm, in the shorthand of their art, gradually becomes a symmetrical branched ornament with two pendent bosses; this is again confused with the Greek iris, (Homer's blue iris, and Pindar's water-flag,)—and the Florentines, in adopting Byzantine ornament, read it into their own Fleur-de-lys; but insert two poppyheads on each side of the entire foil, in their finest heraldry.

15. Meantime the definitely intended poppy, in late Christian Greek art of the twelfth century, modifies the form of the Acanthus leaf with its own, until the northern twelfth-century workman takes the thistle-head for the poppy, and the thistle-leaf for acanthus. The true poppy-head remains in the south, but gets more and more confused with grapes, till the Renaissance carvers are content with any kind of boss full of seed, but insist on such boss or bursting globe as some essential part of their ornament;—the bean-pod for the same reason (not without Pythagorean notions, and some of republican election) is used by Brunelleschi for main decoration of the lantern of Florence duomo; and, finally, the ornamentation gets so shapeless, that M. Violet-le-Duc, in his 'Dictionary of Ornament,' loses trace of its origin altogether, and fancies the later forms were derived from the spadix of the arum.

16. I have no time to enter into farther details; but through all this vast range of art, note this singular fact, that the wheat-ear, the vine, the fleur-de-lys, the poppy, and the jagged leaf of the acanthus-weed, or thistle, occupy the entire thoughts of the decorative workmen trained in classic schools, to the exclusion of the rose, true lily, and other the flowers of luxury. And that the deeply underlying reason of this is in the relation of weeds to corn, or of the adverse powers of nature to the beneficent ones, expressed for us readers of the Jewish scriptures, centrally in the verse, "thorns also, and thistles, shall it bring forth to thee; and thou shalt eat the herb of the field" (*χορτος*, grass or corn), and exquisitely symbolized throughout the fields of Europe by the presence of the purple 'corn-flag,' or gladiolus, and 'corn-rose' (Gerarde's name for *Papaver Rhoeas*), in the midst of carelessly tended corn; and in the traditions of the art of Europe by

the springing of the Acanthus round the basket of the canephora, strictly the basket *for bread*, the idea of bread including all sacred things carried at the feasts of Demeter, Bacchus, and the Queen of the Air. And this springing of the thorny weeds round the basket of reed, distinctly taken up by the Byzantine Italians in the basket-work capital of the twelfth century, (which I have already illustrated at length in the 'Stones of Venice,') becomes the germ of all capitals whatsoever, in the great schools of Gothic, to the end of Gothic time, and also of all the capitals of the pure and noble Renaissance architecture of Angelico and Perugino, and all that was learned from them in the north, while the introduction of the rose, as a primal element of decoration, only takes place when the luxury of English decorated Gothic, the result of that licentious spirit in the lords which brought on the Wars of the Roses, indicates the approach of destruction to the feudal, artistic, and moral power of the northern nations.

For which reason, and many others, I must yet delay the following out of our main subject, till I have answered the other question, which brought me to pause in the middle of this chapter, namely, 'What is a weed?'

CHAPTER VI.

THE PARABLE OF JOASH.

1. SOME ten or twelve years ago, I bought—three times twelve are thirty-six—of a delightful little book by Mrs. Gatty, called 'Aunt Judy's Tales'—whereof to make presents to my little lady friends. I had, at that happy time, perhaps from four-and-twenty to six-and-thirty—I forget exactly how many—very particular little lady friends; and greatly wished Aunt Judy to be the thirty-seventh,—the kindest, wittiest, prettiest girl one had ever read of, at least in so entirely proper and orthodox literature.

2. Not but that it is a suspicious sign of infirmity of faith in our modern moralists to make their exemplary young peo-

ple always pretty ; and dress them always in the height of the fashion. One may read Miss Edgeworth's 'Harry and Lucy,' 'Frank and Mary,' 'Fashionable Tales,' or 'Parents' Assistant,' through, from end to end, with extremest care ; and never find out whether Lucy was tall or short, nor whether Mary was dark or fair, nor how Miss Annaly was dressed, nor, —which was my own chief point of interest—what was the colour of Rosamond's eyes. Whereas Aunt Judy, in charming position after position, is shown to have expressed all her pure evangelical principles with the prettiest of lips ; and to have had her gown, though puritanically plain, made by one of the best modistes in London.

3. Nevertheless, the book is wholesome and useful ; and the nicest story in it, as far as I recollect, is an inquiry into the subject which is our present business, 'What is a weed ?'—in which, by many pleasant devices, Aunt Judy leads her little brothers and sisters to discern that a weed is 'a plant in the wrong place.'

'Vegetable' in the wrong place, by the way, I think Aunt Judy says, being a precisely scientific little aunt. But I can't keep it out of my own less scientific head that 'vegetable' means only something going to be boiled. I like 'plant' better for general sense, besides that it's shorter.

Whatever we call them, Aunt Judy is perfectly right about them as far as she has gone ; but, as happens often even to the best of evangelical instructresses, she has stopped just short of the gist of the whole matter. It is entirely true that a weed is a plant that has got into a wrong place ; but it never seems to have occurred to Aunt Judy that some plants never *do* !

Who ever saw a wood anemone or a heath blossom in the wrong place ? Who ever saw nettle or hemlock in a right one ? And yet, the difference between flower and weed, (I use, for convenience sake, these words in their familiar opposition,) certainly does not consist merely in the flowers being innocent, and the weed stinging and venomous. We do not call the nightshade a weed in our hedges, nor the scarlet agaric in our woods. But we do the corncockle in our fields.

4. Had the thoughtful little tutoress gone but one thought

farther, and instead of "a vegetable in a wrong place," (which it may happen to the innocentest vegetable sometimes to be, without turning into a weed, therefore,) said, "A vegetable which has an innate disposition to *get* into the wrong place," she would have greatly furthered the matter for us; but then she perhaps would have felt herself to be uncharitably dividing with vegetables her own little evangelical property of original sin.

5. This, you will find, nevertheless, to be the very essence of weed character—in plants, as in men. If you glance through your botanical books, you will see often added certain names—"a troublesome weed." It is not its being venomous, or ugly, but its being impertinent—thrusting itself where it has no business, and hinders other people's business—that makes a weed of it. The most accursed of all vegetables, the one that has destroyed for the present even the possibility of European civilization, is only called a weed in the slang of its votaries; * but in the finest and truest English we call so the plant which has come to us by chance from the same country, the type of mere senseless prolific activity, the American water-plant, choking our streams till the very fish that leap out of them cannot fall back, but die on the clogged surface; and indeed, for this unrestrainable, unconquerable insolence of uselessness, what name can be enough dishonourable?

6. I pass to vegetation of nobler rank.

You remember, I was obliged in the last chapter to leave my poppy, for the present, without an English specific name, because I don't like Gerarde's 'corn-rose,' and can't yet think of another. Nevertheless, I would have used Gerarde's name, if the corn-rose were as much a rose as the corn-flag is a flag. But it isn't. The rose and lily have quite different relations to the corn. The lily is grass in loveliness, as the corn is grass in use; and both grow together in peace—gladiolus in the wheat, and narcissus in the pasture. But the rose is of

* And I have too harshly called our English Vines, 'wicked weeds of Kent,' in *Fors Clavigera*, xxvii., vol. i., p. 377. Much may be said for Ale, when we brew it for our people honestly.

another and higher order than the corn, and you never saw a cornfield overrun with sweetbrier or apple-blossom.

They have no mind, they, to get into the wrong place.

What is it, then, this temper in some plants—malicious as it seems—intrusive, at all events, or erring,—which brings them out of their places—thrusts them where they thwart us and offend?

7. Primarily, it is mere hardihood and coarseness of make. A plant that can live anywhere, will often live where it is not wanted. But the delicate and tender ones keep at home. You have no trouble in 'keeping down' the spring gentian. It rejoices in its own Alpine home, and makes the earth as like heaven as it can, but yields as softly as the air, if you want it to give place. Here in England, it will only grow on the loneliest moors, above the high force of Tees; its Latin name, for us (I may as well tell you at once) is to be '*Lucia verna*;' and its English one, Lucy of Teesdale.

8. But a plant may be hardy, and coarse of make, and able to live anywhere, and yet be no weed. The coltsfoot, so far as I know, is the first of large-leaved plants to grow afresh on ground that has been disturbed: fall of Alpine débris, ruin of railroad embankment, waste of drifted slime by flood, it seeks to heal and redeem; but it does not offend us in our gardens, nor impoverish us in our fields.

Nevertheless, mere coarseness of structure, indiscriminate hardihood, is at least a point of some unworthiness in a plant. That it should have no choice of home, no love of native land, is ungente; much more if such discrimination as it has, be immodest, and incline it, seemingly, to open and much-traversed places, where it may be continually seen of strangers.

The tormentilla gleams in showers along the mountain turf; her delicate crosslets are separate, though constellate, as the rubied daisy. But the king-cup—(blessing be upon it always no less)—crowds itself sometimes into too burnished flame of inevitable gold. I don't know if there was anything in the darkness of this last spring to make it brighter in resistance; but I never saw any spaces of full warm yellow, in natural colour, so intense as the meadows between Reading

and the Thames ; nor did I know perfectly what purple and gold meant, till I saw a field of park land embroidered a foot deep with king-cup and clover—while I was correcting my last notes on the spring colours of the Royal Academy—at Aylesbury.

9. And there are two other questions of extreme subtlety connected with this main one. What shall we say of the plants whose entire destiny is parasitic—which are not only sometimes, and *impertinently*, but always, and *pertinently*, out of place ; not only out of the right place, but out of any place of their own ? When is mistletoe, for instance, in the right place, young ladies, think you ? On an apple tree, or on a ceiling ? When is ivy in the right place ?—when wallflower ? The ivy has been torn down from the towers of Kenilworth ; the weeds from the arches of the Coliseum, and from the steps of the Araceli, irreverently, vilely, and in vain ; but how are we to separate the creatures whose office it is to abate the grief of ruin by their gentleness,

“ wafting wallflower scents
From out the crumbling ruins of fallen pride,
And chambers of transgression, now forlorn,”

from those which truly resists the toil of men, and conspire against their fame ; which are cunning to consume, and prolific to encumber ; and of whose perverse and unwelcome sowing we know, and can say assuredly, “ An enemy hath done this.”

10. Again. The character of strength which gives prevalence over others to any common plant, is more or less consistently dependent on woody fibre in the leaves : giving them strong ribs and great expanding extent ; or spinous edges, and wrinkled or gathered extent.

Get clearly into your mind the nature of these two conditions. When a leaf is to be spread wide, like the Burdock, it is supported by a framework of extending ribs like a Gothic roof. The supporting function of these is geometrical ; every one is constructed like the girders of a bridge, or beams of a floor, with all manner of science in the distribution of their

substance in the section, for narrow and deep strength ; and the shafts are mostly hollow. But when the extending space of a leaf is to be enriched with fulness of folds, and become beautiful in wrinkles, this may be done either by pure undulation as of a liquid current along the leaf edge, or by sharp 'drawing'—or 'gathering' I believe ladies would call it—and stitching of the edges together. And this stitching together, if to be done very strongly, is done round a bit of stick, as a sail is reefed round a mast ; and this bit of stick needs to be compactly, not geometrically strong ; its function is essentially that of starch,—not to hold the leaf up off the ground against gravity ; but to stick the edges out, stiffly, in a crimped frill. And in beautiful work of this kind, which we are meant to study, the stays of the leaf—or stay-bones—are finished off very sharply and exquisitely at the points ; and indeed so much so, that they prick our fingers when we touch them ; for they are not at all meant to be touched, but admired.

11. To be admired,—with qualification, indeed, always, but with extreme respect for their endurance and orderliness. Among flowers that pass away, and leaves that shake as with ague, or shrink like bad cloth,—these, in their sturdy growth and enduring life, we are bound to honour ; and, under the green holly, remember how much softer friendship was failing, and how much of other loving, folly. And yet—you are not to confuse the thistle with the cedar that is in Lebanon ; nor to forget—if the spinous nature of it become too cruel to provoke and offend—the parable of Joash to Amaziah, and its fulfilment : "There passed by a wild beast that was in Lebanon, and trode down the thistle."

12. Then, lastly, if this rudeness and insensitiveness of nature be gifted with no redeeming beauty ; if the boss of the thistle lose its purple, and the star of the Lion's tooth, its light ; and, much more, if service be perverted as beauty is lost, and the honied tube, and medicinal leaf, change into mere swollen emptiness, and salt brown membrane, swayed in nerveless languor by the idle sea,—at last the separation between the two natures is as great as between the fruitful earth and fruitless ocean ; and between the living hands that

tend the Garden of Herbs where Love is, and those unclasped, that toss with tangle and with shells.

* * * * *

13. I had a long bit in my head, that I wanted to write, about St. George of the Seaweed, but I've no time to do it; and those few words of Tennyson's are enough, if one thinks of them: only I see, in correcting press, that I've partly misapplied the idea of 'gathering' in the leaf edge. It would be more accurate to say it was gathered at the central rib; but there is nothing in needlework that will represent the actual excess by lateral growth at the edge, giving three or four inches of edge for one of centre. But the stiffening of the fold by the thorn which holds it out is very like the action of a ship's spars on its sails; and absolutely in many cases like that of the spines in a fish's fin, passing into the various conditions of serpentine and dracontic crest, connected with all the terrors and adversities of nature; not to be dealt with in a chapter on weeds.

14. Here is a sketch of a crested leaf of less adverse temper, which may as well be given, together with Plate III., in this number, these two engravings being meant for examples of two different methods of drawing, both useful according to character of subject. Plate III. is sketched first with a finely-pointed pen, and common ink, on white paper; then washed rapidly with colour, and retouched with the pen to give sharpness and completion. This method is used because the thistle leaves are full of complex and sharp sinuosities, and set with intensely sharp spines passing into hairs, which require many kinds of execution with the fine point to imitate at all. In the drawing there was more look of the bloom or woolliness on the stems, but it was useless to try for this in the mezzotint, and I desired Mr. Allen to leave his work at the stage where it expressed as much form as I wanted. The leaves are of the common marsh thistle, of which more anon; and the two long lateral ones are only two different views of the same leaf, while the central figure is a young leaf just opening. It beat me, in its delicate bossing, and I had to leave it, discontentedly enough.



PLATE III.—ACANTHOID LEAVES. NORTHERN ATTIC TYPE.



PLATE IV.—CRESTED LEAVES. LETTUCE-THISTLE.

Plate IV. is much better work, being of an easier subject, adequately enough rendered by perfectly simple means. Here I had only a succulent and membranous surface to represent, with definite outlines, and merely undulating folds; and this is sufficiently done by a careful and firm pen outline on grey paper, with a slight wash of colour afterwards, reinforced in the darks; then marking the lights with white. This method is classic and authoritative, being used by many of the greatest masters, (by Holbein continually;) and it is much the best which the general student can adopt for expression of the action and muscular power of plants.

The goodness or badness of such work depends absolutely on the truth of the single line. You will find a thousand botanical drawings which will give you a delicate and deceptive resemblance of the leaf, for one that will give you the right convexity in its backbone, the right perspective of its peaks when they foreshorten, or the right relation of depth in the shading of its dimples. On which, in leaves as in faces, no little expression of temper depends.

Meantime we have yet to consider somewhat more touching that temper itself, in next chapter.

CHAPTER VII.

THE PARABLE OF JOTHAM.

1. I do not know if my readers were checked, as I wished them to be, at least for a moment, in the close of the last chapter, by my talking of thistles and dandelions changing into seaweed, by gradation of which, doubtless, Mr. Darwin can furnish us with specious and sufficient instances. But the two groups will not be contemplated in our Oxford system as in any parental relations whatsoever.

We shall, however, find some very notable relations existing between the two groups of the wild flowers of dry land, which represent, in the widest extent, and the distinctest opposition, the two characters of material serviceableness and unservice-

ableness ; the groups which in our English classification will be easily remembered as those of the Thyme, and the Daisy.

The one, scented as with incense—medicinal—and in all gentle and humble ways, useful. The other, scentless—helpless for ministry to the body ; infinitely dear as the bringer of light, ruby, white and gold ; the three colours of the Day, with no hue of shade in it. Therefore I take it on the coins of St. George for the symbol of the splendour or light of heaven, which is dearest where humblest.

2. Now these great two orders—of which the types are the thyme and the daisy—you are to remember generally as the ‘Herbs’ and the ‘Sunflowers.’ You are not to call them Lipped flowers, nor Composed flowers ; because the first is a vulgar term ; for when you once come to be able to draw a lip, or, in noble duty, to kiss one, you will know that no other flower in earth is like that : and the second is an indefinite term ; for a foxglove is as much a ‘composed’ flower as a daisy ; but it is composed in the shape of a spire, instead of the shape of the sun. And again a thistle, which common botany calls a composed flower, as well as a daisy, is composed in quite another shape, being on the whole, bossy instead of flat ; and of another temper, or composition of mind, also, being connected in that respect with butterburs, and a vast company of rough, knotty, half-black or brown, and generally unluminous—flowers I can scarcely call them—and weeds I will not,—creatures, at all events, in nowise to be gathered under the general name ‘Composed,’ with the stars that crown Chaucer’s Alcestis, when she returns to the day from the dead.

But the wilder and stronger blossoms of the Hawk’s-eye—again you see I refuse for them the word weed ;—and the waste-loving Chicory, which the Venetians call “*Sponsa solis*,” are all to be held in one class with the Sunflowers ; but dedicate,—the daisy to Alcestis alone ; others to Clytia, or the Physician Apollo himself ; but I can’t follow their mythology yet awhile.

3. Now in these two families you have typically Use op-

posed to Beauty in *wildness*; it is their wildness which is their virtue;—that the thyme is sweet where it is unthought of, and the daisies red, where the foot despises them: while, in other orders, wildness is their crime,—“Wherefore, when I looked that it should bring forth grapes, brought it forth wild grapes?” But in all of them you must distinguish between the pure wildness of flowers and their distress. It may not be our duty to tame them; but it must be, to relieve.

4. It chanced, as I was arranging the course of these two chapters, that I had examples given me of distressed and happy wildness, in immediate contrast. The first, I grieve to say, was in a bit of my own brushwood, left uncared-for evidently many a year before it became mine. I had to cut my way into it through a mass of thorny ruin; black, birds-nest like, entanglement of brittle spray round twisted stems of ill-grown birches strangling each other, and changing half into roots among the rock clefts; knotted stumps of never-blossoming blackthorn, and choked stragglings of holly, all laced and twisted and tethered round with an untouchable, almost unhewable, thatch, a foot thick, of dead bramble and rose, laid over rotten ground through which the water soaked ceaselessly, undermining it into merely unctuous clods and clots, knitted together by mossy sponge. It was all Nature's free doing! she had had her way with it to the uttermost; and clearly needed human help and interference in her business; and yet there was not one plant in the whole ruinous and deathful riot of the place, whose nature was not in itself wholesome and lovely; but all lost for want of discipline.

5. The other piece of wild growth was among the fallen blocks of limestone under Malham Cove. Sheltered by the cliff above from stress of wind, the ash and hazel wood spring there in a fair and perfect freedom, without a diseased bough, or an unwholesome shade. I do not know why mine is all encumbered with overgrowth, and this so lovely that scarce a branch could be gathered but with injury;—while underneath, the oxalis, and the two smallest geraniums (*Lucidum* and *Herb-Robert*) and the mossy saxifrage, and the cross-leaved bed-straw, and the white pansy, wrought themselves

into wreaths among the fallen crags, in which every leaf rejoiced, and was at rest.

6. Now between these two states of equally natural growth, the point of difference that forced itself on me (and practically enough, in the work I had in my own wood), was not so much the withering and waste of the one, and the life of the other, as the thorniness and cruelty of the one, and the softness of the other. In Malham Cove, the stones of the brook were softer with moss than any silken pillow—the crowded oxalis leaves yielded to the pressure of the hand, and were not felt—the cloven leaves of the Herb-Robert and orbed clusters of its companion overflowed every rent in the rude crags with living balm; there was scarcely a place left by the tenderness of the happy things, where one might not lay down one's forehead on their warm softness, and sleep. But in the waste and distressed ground, the distress had changed itself to cruelty. The leaves had all perished, and the bending saplings, and the wood of trust;—but the thorns were there, immortal, and the gnarled and sapless roots, and the dusty treacheries of decay.

7. Of which things you will find it good to consider also otherwise than botanically. For all these lower organisms suffer and perish, or are gladdened and flourish, under conditions which are in utter precision symbolical, and in utter fidelity representative, of the conditions which induce adversity and prosperity in the kingdoms of men: and the Eternal Demeter,—Mother, and Judge,—brings forth, as the herb yielding seed, so also the thorn and the thistle, not to herself, but *to thee*.

8. You have read the words of the great Law often enough;—have you ever thought enough of them to know the difference between these two appointed means of Distress? The first, the Thorn, is the type of distress *caused by crime*, changing the soft and breathing leaf into inflexible and wounding stubbornness. The second is the distress appointed to be the means and herald of good,—Thou shalt see the stubborn thistle bursting, into glossy purple, which outredden, all voluptuous garden roses.

9. It is strange that, after much hunting, I cannot find authentic note of the day when Scotland took the thistle for her emblem; and I have no space (in this chapter at least) for tradition; but, with whatever lightness of construing we may receive the symbol, it is actually the truest that could have been found, for some conditions of the Scottish mind. There is no flower which the Proserpina of our Northern Sicily cherishes more dearly: and scarcely any of us recognize enough the beautiful power of its close-set stars, and rooted radiance of ground leaves; yet the stubbornness and ungraceful rectitude of its stem, and the besetting of its wholesome substance with that fringe of offence, and the forwardness of it, and dominance,—I fear to lacerate some of my dearest friends if I went on:—let them rather, with Bailie Jarvie's true conscience,* take their Scott from the inner shelf in their heart's library which all true Scotsmen give him, and trace, with the swift reading of memory, the characters of Fergus M'Ivor, Hector M'Intyre, Mause Headrigg, Alison Wilson, Richie Moniplies, and Andrew Fairservice; and then say, if the faults of all these, drawn as they are with a precision of touch like a Corinthian sculptor's of the acanthus leaf, can be found in anything like the same strength in other races, or if so stubbornly folded and starched moni-plies of irritating kindness, selfish friendliness, lowly conceit, and intolerable fidelity, are native to any other spot of the wild earth of the habitable globe.

10. Will you note also—for this is of extreme interest—that these essential faults are all mean faults;—what we may call ground-growing faults; conditions of semi-education,

* Has my reader ever thought,—I never did till this moment,—how it perfects the exquisite character which Scott himself loved, as he invented, till he changed the form of the novel, that his habitual interjection should be this word;—not but that the oath, by conscience, was happily still remaining then in Scotland, taking the place of the mediæval 'by St. Andrew,' we in England, long before the Scot, having lost all sense of the Puritanical appeal to private conscience, as of the Catholic oath, 'by St. George;' and our uncanonized 'by George' in sonorous rudeness, ratifying, not now our common conscience, but our individual opinion.

of hardly-treated homelife, or of coarsely-minded and wandering prosperity. How literally may we go back from the living soul symbolized, to the strangely accurate earthly symbol, in the prickly weed. For if, with its bravery of endurance, and carelessness in choice of home, we find also definite faculty and habit of migration, volant mechanism for choiceless journey, not divinely directed in pilgrimage to known shrines; but carried at the wind's will by a Spirit which listeth *not*—it will go hard but that the plant shall become, if not dreaded, at least despised; and, in its wandering and reckless splendour, disgrace the garden of the sluggard, and possess the inheritance of the prodigal: until even its own nature seems contrary to good, and the invocation of the just man be made to it as the executor of Judgment, "Let thistles grow instead of wheat, and cockle instead of barley."

11. Yet to be despised—either for men or flowers—may be no ill-fortune; the real ill-fortune is only to be despicable. These faults of human character, wherever found, observe, belong to it as ill-trained—incomplete; confirm themselves only in the vulgar. There is no base pertinacity, no overweening conceit, in the Black Douglas, or Claverhouse, or Montrose; in these we find the pure Scottish temper, of heroic endurance and royal pride; but, when, in the pay, and not deceived, but purchased, idolatry of Mammon, the Scottish persistence and pride become knit and vested in the spleuchan, and your stiff Covenanter makes his covenant with Death, and your Old Mortality deciphers only the senseless legends of the eternal gravestone,—you get your weed, earth grown, in bitter verity, and earth-devastating, in bitter strength.

12. I have told you, elsewhere, we are always first to study national character in the highest and purest examples. But if our knowledge is to be complete, we have to study also the special diseases of national character. And in exact opposition to the most solemn virtue of Scotland, the domestic truth and tenderness breathed in all Scottish song, you have this special disease and mortal cancer, this woody-fibriness, literally, of temper and thought: the consummation of which into pure

lignite, or rather black Devil's charcoal—the sap of the birks of Aberfeldy become cinder, and the blessed juices of them, deadly gas,—you may know in its pure blackness best in the work of the greatest of these ground-growing Scotchmen, Adam Smith.

13. No man of like capacity, I believe, born of any other nation, could have deliberately, and with no momentary shadow of suspicion or question, formalized the spinous and monstrous fallacy that human commerce and policy are *naturally* founded on the desire of every man to possess his neighbour's goods.

This is the 'release unto us Barabbas,' with a witness; and the deliberate systematization of that cry, and choice, for perpetual repetition and fulfilment in Christian statesmanship, has been, with the strange precision of natural symbolism and retribution, signed, (as of old, by strewing of ashes on Kidron,) by strewing of ashes on the brooks of Scotland; waters once of life, health, music, and divine tradition; but to whose festering scum you may now set fire with a candle; and of which, round the once excelling palace of Scotland, modern sanitary science is now helplessly contending with the poisonous exhalations.

14. I gave this chapter its heading, because I had it in my mind to work out the meaning of the fable in the ninth chapter of Judges, from what I had seen on that thorny ground of mine, where the bramble was king over all the trees of the wood. But the thoughts are gone from me now; and as I re-read the chapter of Judges,—now, except in my memory, unread, as it chanced, for many a year,—the sadness of that story of Gideon fastens on me, and silences me. *This* the end of his angel visions, and dream-led victories, the slaughter of all his sons but this youngest,*—and he never again heard of in Israel!

You Scottish children of the Rock, taught through all your once pastoral and noble lives by many a sweet miracle of dew on fleece and ground,—once servants of mighty kings, and

* 'Jotham,' 'Sum perfectio eorum,' or 'Consummatio eorum.' (Interpretation of name in Vulgate index.)

keepers of sacred covenant ; have you indeed dealt truly with your warrior kings, and prophet saints, or are these ruins of their homes, and shrines, dark with the fire that fell from the curse of Jerubbaal ?

CHAPTER VIII.

THE STEM.

1. As I read over again, with a fresh mind, the last chapter, I am struck by the opposition of states which seem best to fit a weed for a weed's work,—stubbornness, namely, and flaccidity. On the one hand, a sternness and a coarseness of structure which changes its stem into a stake, and its leaf into a spine ; on the other, an utter flaccidity and ventosity of structure, which changes its stem into a riband, and its leaf into a bubble. And before we go farther—for we are not yet at the end of our study of these obnoxious things—we had better complete an examination of the parts of a plant in general, by ascertaining what a Stem proper is ; and what makes it stiffer, or hollower, than we like it ;—how, to wit, the gracious and generous strength of ash differs from the spinous obstinacy of black-thorn,—and how the geometric and enduring hollowness of a stalk of wheat differs from the soft fulness of that of a mushroom. To which end, I will take up a piece of study, not of black, but white, thorn, written last spring.

2. I suppose there is no question but that all nice people like hawthorn blossom.

I want, if I can, to find out to-day, 25th May, 1875, what it is we like it so much for : holding these two branches of it in my hand—one full out, the other in youth. This full one is a mere mass of symmetrically balanced—snow, one was going vaguely to write, in the first impulse. But it is nothing of the sort. White,—yes, in a high degree ; and pure, totally ; but not at all dazzling in the white, nor pure in an insultingly rivalless manner, as snow would be ; yet pure somehow, certainly ; and white, absolutely, in spite of what might be thought failure,—imperfection—nay, even distress and loss in it. For

every little rose of it has a green darkness in the centre—not even a pretty green, but a faded, yellowish, glutinous, unaccomplished green; and round that, all over the surface of the blossom, whose shell-like petals are themselves deep sunk, with grey shadows in the hollows of them—all above this already subdued brightness, are strewn the dark points of the dead stamens—manifest more and more, the longer one looks, as a kind of grey sand, sprinkled without sparing over what looked at first unspotted light. And in all the ways of it the lovely thing is more like the spring frock of some prudent little maid of fourteen, than a flower;—frock with some little spotty pattern on it to keep it from showing an unintended and inadvertent spot,—if Fate should ever inflict such a thing! Undeveloped, thinks Mr. Darwin,—the poor short-coming, ill-blanch'd thorn blossom—going to be a Rose, some day soon; and, what next?—who knows?—perhaps a Pæony!

3. Then this next branch, in dawn and delight of youth, set with opening clusters of yet numerable blossom, four, and five, and seven, edged, and islanded, and ended, by the sharp leaves of freshest green, deepened under the flowers, and stud-ded round with bosses, better than pearl beads of St. Agnes' rosary,—folded over and over, with the edges of their little leaves pouting, as the very softest waves do on flat sand where one meets another; then opening just enough to show the violet colour within—which yet isn't violet colour, nor even “*meno che le rose*,” but a different colour from every other lilac that one ever saw;—faint and faded even before it sees light, as the filmy cup opens over the depth of it, then broken into purple motes of tired bloom, fading into darkness, as the cup extends into the perfect rose.

This, with all its sweet change that one would so fain stay, and soft effulgence of bud into softly falling flower, one has watched—how often; but always with the feeling that the blossoms are thrown over the green depth like white clouds—never with any idea of so much as asking what holds the clouds there. Have each of the innumerable blossoms a separate stalk? and, if so, how is it that one never thinks of the stalk, as one does with currants?

4. Turn the side of the branch to you ;—Nature never meant you to see it so ; but now it is all stalk below, and stamens above,—the petals nothing, the stalks all tiny trees, always dividing their branches mainly into three—one in the centre short, and the two lateral, long, with an intermediate extremely long one, if needed, to fill a gap, so contriving that the flowers shall all be nearly at the same level, or at least surface of ball, like a guelder rose. But the cunning with which the tree conceals its structure till the blossom is fallen, and then—for a little while, we had best look no more at it, for it is all like grape-stalks with no grapes.

These, whether carrying hawthorn blossom and haw, or grape blossom and grape, or peach blossom and peach, you will simply call the ‘stalk,’ whether of flower or fruit. A ‘stalk’ is essentially round, like a pillar ; and has, for the most part, the power of first developing, and then shaking off, flower and fruit from its extremities. You can pull the peach from its stalk, the cherry, the grape. Always at some time of its existence, the flower-stalk lets fall something of what it sustained, petal or seed.

In late Latin it is called ‘petiolus,’ the little foot ; because the expanding piece that holds the grape, or olive, is a little like an animal’s foot. Modern botanists have misapplied the word to the *leaf*-stalk, which has no resemblance to a foot at all. We must keep the word to its proper meaning, and, when we want to write Latin, call it ‘petiolus ;’ when we want to write English, call it ‘stalk,’ meaning always fruit or flower stalk.

I cannot find when the word ‘stalk’ first appears in English :—its derivation will be given presently.

5. Gather next a hawthorn leaf. That also has a stalk ; but you can’t shake the leaf off it. It, and the leaf, are essentially one ; for the sustaining fibre runs up into every ripple or jag of the leaf’s edge : and its section is different from that of the flower-stalk ; it is no more round, but has an upper and under surface, quite different from each other. It will be better, however, to take a larger leaf to examine this structure in. Cabbage, cauliflower, or rhubarb, would any of them be good,

but don't grow wild in the luxuriance I want. So, if you please, we will take a leaf of burdock, (*Arctium Lappa*,) the principal business of that plant being clearly to grow leaves wherewith to adorn fore-grounds.*

6. The outline of it in Sowerby is not an intelligent one, and I have not time to draw it but in the rudest way myself; Fig. 13, *a*; with perspectives of the elementary form below, *b*, *c*, and *d*. By help of which, if you will construct a burdock leaf in paper, my rude outline (*a*) may tell the rest of what I want you to see.

Take a sheet of stout note paper, Fig. 14, *A*, double it sharply down the centre, by the dotted line, then give it the two cuts at *a* and *b*, and double those pieces sharply back, as at *B*; then, opening them again, cut the whole into the form *C*; and then, pulling up the corners *c* *d*, stitch them together with a loose thread so that the points *c* and *d*

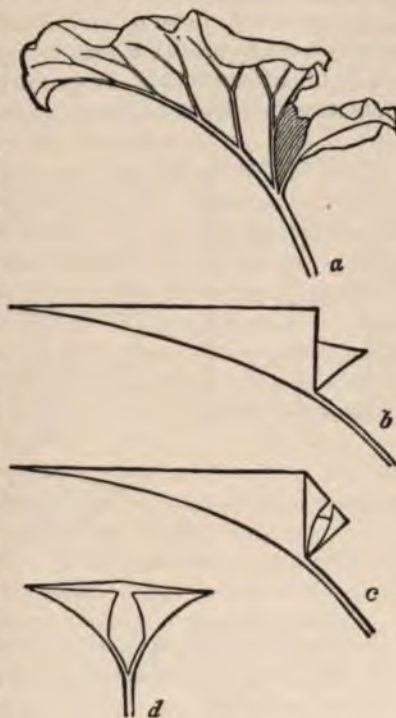


FIG. 13.

shall be within half an inch of each other; and you will have a kind of triangular scoop, or shovel, with a stem, by which you can sufficiently hold it, *D*.

7. And from this easily constructed and tenable model, you may learn at once these following main facts about all leaves.

* If you will look at the engraving, in the *England and Wales* series, of Turner's *Oakhampton*, you will see its use.

[I.] That they are not flat, but, however slightly, always hollowed into craters, or raised into hills, in one or another direction ; so that any drawable outline of them does not in the least represent the real extent of their surfaces ; and until you know how to draw a cup, or a mountain, rightly, you have no chance of drawing a leaf. My simple artist readers of long ago, when I told them to draw leaves, thought they could do them by the boughful, whenever they liked. Alas, except by old William Hunt, and Burne Jones, I've not seen a leaf painted, since those burdocks of Turner's ; far less sculptured—though

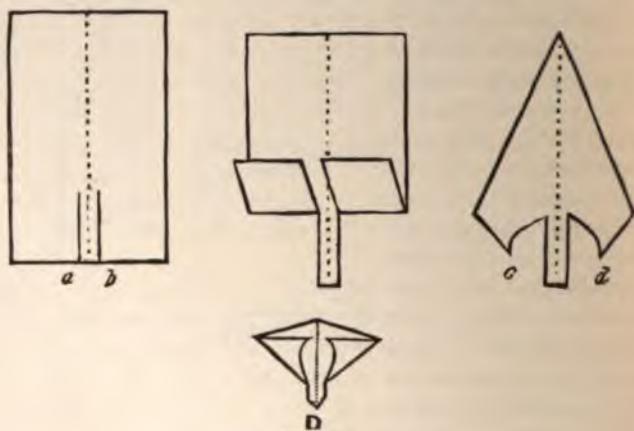


FIG. 14.

one would think at first that was easier ! Of which we shall have talk elsewhere ; here I must go on to note fact number two, concerning leaves.

8. [II.] The strength of their supporting stem consists not merely in the gathering together of all the fibres, but in gathering them essentially into the profile of the letter V, which you will see your doubled paper stem has ; and of which you can feel the strength and use, in your hand, as you hold it. Gather a common plantain leaf, and look at the way it puts its round ribs together at the base, and you will understand the matter at once. The arrangement is modified and

disguised in every possible way, according to the leaf's need : in the aspen, the leaf-stalk becomes an absolute vertical plank ; and in the large trees is often almost rounded into the likeness of a fruit-stalk ;—but, in all,* the essential structure is this doubled one ; and in all, it opens at the place where the leaf joins the main stem, into a kind of cup, which holds next year's bud in the hollow of it.

9. Now there would be no inconvenience in your simply getting into the habit of calling the round petiol of the fruit the 'stalk,' and the contracted channel of the leaf, 'leaf-stalk.' But this way of naming them would not enforce, nor fasten in your mind, the difference between the two, so well as if you have an entirely different name for the leaf-stalk. Which is the more desirable, because the limiting character of the leaf, botanically, is—(I only learned this from my botanical friend the other day, just in the very moment I wanted it,)—that it holds the bud of the new stem in its own hollow, but cannot itself grow in the hollow of anything else ;—or, in botanical language, leaves are never axillary,—don't grow in armpits, but are themselves armpits ; hollows, that is to say, where they spring from the main stem.

10. Now there is already a received and useful botanical word, 'cyme' (which we shall want in a little while,) derived from the Greek *κύμα*, a swelling or rising wave, and used to express a swelling cluster of foamy blossom. Connected with that word, but in a sort the reverse of it, you have the Greek '*κύμβη*,' the hollow of a cup, or bowl ; whence *κύμβαλον*, a cymbal,—that is to say, a musical instrument owing its tone to its hollowness. These words become in Latin, *cymba*, and *cymbalum* ; and I think you will find it entirely convenient and advantageous to call the leaf-stalk distinctively the 'cymba,' retaining the mingled idea of cup and boat, with respect at least to the part of it that holds the bud ; and understanding that it gathers itself into a V-shaped, or even narrowly vertical, section, as a boat narrows to its bow, for strength to sustain the leaf.

* General assertions of this kind must always be accepted under indulgence,—exceptions being made afterwards.

With this word you may learn the Virgilian line, that shows the final use of iron—or iron-darkened—ships :

“ Et ferrugineâ subvectat corpora cymbâ.”

The “subvectat corpora” will serve to remind you of the office of the leafy cymba in carrying the bud ; and make you thankful that the said leafy vase is not of iron ; and is a ship of Life instead of Death.

11. Already, not once, nor twice, I have had to use the word ‘stem,’ of the main round branch from which both stalk and cymba spring. This word you had better keep for all growing, or advancing, shoots of trees, whether from the ground, or from central trunks and branches. I regret that the words multiply on us ; but each that I permit myself to use has its own proper thought or idea to express, as you will presently perceive ; so that true knowledge multiplies with true words.

12. The ‘stem,’ you are to say, then, when you mean the *advancing* shoot,—which lengthens annually, while a stalk ends every year in a blossom, and a cymba in a leaf. A stem is essentially round,* square, or regularly polygonal ; though, as a cymba may become exceptionally round, a stem may become exceptionally flat, or even mimic the shape of a leaf. Indeed I should have liked to write “a stem is essentially round, and constructively, on occasion, square,”—but it would have been too grand. The fact is, however, that a stem is really a roundly minded thing, throwing off its branches in circles as a trundled mop throws off drops, though it can always order the branches to fly off in what order it likes,—two at a time, opposite to each other ; or three, or five, in a spiral coil ; or one here and one there, on this side and that ; but it is always twisting, in its own inner mind and force ; hence it is especially proper to use the word ‘stem’ of it—*στέμμα*, a twined wreath ; properly, twined round a staff, or sceptre : therefore, learn at once by heart these lines in the opening Iliad :

“ Στέμματ’ ἔχων ἐν χερσὶν ἐκηβόλου Ἀπόλλωνος,
Χρυσείῃ ἀνὰ σκήπτρῳ.”

And recollect that a sceptre is properly a staff to lean upon ; and that as a crown or diadem is first a binding thing, a

* I use ‘round’ rather than ‘cylindrical,’ for simplicity’s sake.



PLATE V.—OCCULT SPIRAL ACTION. WASTE-THISTLE.

'sceptre' is first a *supporting* thing, and it is in its nobleness, itself made of the stem of a young tree. You may just as well learn also this :

“Ναὶ μὰ τόδε σκῆπτρον, τὸ μὲν οὔποτε φύλλα καὶ ὕζους
 φύσει, ἐπειδὴ πρῶτα τομὴν ἐν ὕρεσσι λείοιπεν,
 Οὐδ' ἀναθλήσει· περὶ γὰρ βᾶ ἐ χαλκὸς ἔλειψε
 φύλλα' τε καὶ φλοιόν· νῦν αὖτε μιν ὕψι Ἀχαιῶν
 Ἐν παλάμῃς φορέονσι δικασπόλοι, οἳ τε θέμιστας
 Πρὸς Διὸς εἰρύαται.”

“Now, by this sacred sceptre hear me swear
 Which never more shall leaves or blossoms bear,
 Which, severed from the trunk, (as I from thee,)
 On the bare mountains left its parent tree ;
 This sceptre, formed by tempered steel to prove—
 An ensign of the delegates of Jove,
 From whom the power of laws and justice springs
 (Tremendous oath, inviolate to Kings).”

13. The supporting power in the tree itself is, I doubt not, greatly increased by this spiral action ; and the fine instinct of its being so, caused the twisted pillar to be used in the Lombardic Gothic,—at first, merely as a pleasant variety of form, but at last constructively and universally, by Giotto and all the architects of his school. Not that the spiral form actually adds to the strength of a Lombardic pillar, by imitating contortions of wood, any more than the fluting of a Doric shaft adds to its strength by imitating the canaliculation of a reed ; but the perfect action of the imagination, which had adopted the encircling acanthus for the capital, adopted the twining stemma for the shaft ; the pure delight of the eye being the first condition in either case : and it is inconceivable how much of the pleasure taken both in ornament and in natural form is founded elementarily on groups of spiral line. The study in our fifth plate, of the involucre of the waste-thistle,* is as good an example as I can give of the more subtle and concealed conditions of this structure.

* *Carduus Arvensis*. ‘Creeping Thistle,’ in Sowerby ; why, I cannot conceive, for there is no more creeping in it than in a furzebush. But it especially haunts foul and neglected ground ; so I keep the Latin

14. Returning to our present business of nomenclature, we find the Greek word, 'stemma,' adopted by the Latins, becoming the expression of a growing and hereditary race; and the branched tree, the natural type, among all nations, of multiplied families. Hence the entire fitness of the word for our present purposes; as signifying, "a spiral shoot extending itself by branches." But since, unless it is spiral, it is not a stem, and unless it has branches, it is not a stem, we shall still want another word for the sustaining 'sceptre' of a foxglove, or cowslip. Before determining that, however, we must see what need there may be of one familiar to our ears until lately, although now, I understand, falling into disuse.

15. By our definition, a stem is a spirally bent, essentially living and growing, shoot of vegetation. But the branch of a tree, in which many such stems have their origin, is not, except in a very subtle and partial way, spiral; nor, except in the shoots that spring from it, progressive forwards; it only receives increase of thickness at its sides. Much more, what used to be called the *trunk* of a tree, in which many branches are united, has ceased to be, except in mere tendency and temper, spiral; and has so far ceased from growing as to be often in a state of decay in its interior, while the external layers are still in serviceable strength.

16. If, however, a trunk were only to be defined as an arrested stem, or a cluster of arrested stems, we might perhaps refuse, in scientific use, the popular word. But such a definition does not touch the main idea. Branches usually begin to assert themselves at a height above the ground approximately fixed for each species of tree,—low in an oak, high in a stone pine; but, in both, marked as a point of *structural change in the direction of growing force*, like the spring of a

name, translating 'Waste-Thistle.' I could not show the variety of the curves of the involucre without enlarging; and if, on this much increased scale, I had tried to draw the flower, it would have taken Mr. Allen and me a good month's more work. And I had no more a month than a life, to spare: so the action only of the spreading flower is indicated, but the involucre drawn with precision.

vault from a pillar ; and as the tree grows old, some of its branches getting torn away by winds or falling under the weight of their own fruit, or load of snow, or by natural decay, there remains literally a 'truncated' mass of timber, still bearing irregular branches here and there, but inevitably suggestive of resemblance to a human body, after the loss of some of its limbs.

And to prepare trees for their practical service, what age and storm only do partially, the first rough process of human art does completely. The branches are lopped away, leaving literally the 'truncus' as the part of the tree out of which log and rafter can be cut. And in many trees, it would appear to be the chief end of their being to produce this part of their body on a grand scale, and of noble substance ; so that, while in thinking of vegetable life without reference to its use to men or animals, we should rightly say that the essence of it was in leaf and flower—not in trunk or fruit ; yet for the sake of animals, we find that some plants, like the vine, are apparently meant chiefly to produce fruit ; others, like laurels, chiefly to produce leaves ; others chiefly to produce flowers ; and others to produce permanently serviceable and sculptural wood ; or, in some cases, merely picturesque and monumental masses of vegetable rock, "intertwisted fibres serpentine,"—of far nobler and more pathetic use in their places, and their enduring age, than ever they could be for material purpose in human habitation. For this central mass of the vegetable organism, then, the English word 'trunk' and French 'tronc' are always in accurate scholarship to be retained—meaning the part of a tree which remains when its branches are lopped away.

17. We have now got distinct ideas of four different kinds of stem, and simple names for them in Latin and English,—*Petiolus*, *Cymba*, *Stemma*, and *Truncus* ; *Stalk*, *Leaf-stalk*, *Stem*, and *Trunk* ; and these are all that we shall commonly need. There is, however, one more that will be sometimes necessary, though it is ugly and difficult to pronounce, and must be as little used as we can.

And here I must ask you to learn with me a little piece of

Roman history. I say, to *learn* with me, because I don't know any Roman history except the two first books of Livy, and little bits here and there of the following six or seven. I only just know enough about it to be able to make out the bearings and meaning of any fact that I now learn. The greater number of modern historians know, (if honest enough even for that,) the facts, or something that may possibly be like the facts, but haven't the least notion of the meaning of them. So that, though I have to find out everything that I want in Smith's dictionary, like any schoolboy, I can usually tell you the significance of what I so find, better than perhaps even Mr. Smith himself could.

18. In the 586th page of Mr. Smith's volume, you have it written that 'Calvus,' bald-head, was the name of a family of the Licinia gens; that the man of whom we hear earliest, as so named, was the first plebeian elected to military tribuneship in B.C. 400; and that the fourth of whom we hear, was surnamed 'Stolo,' because he was so particular in pruning away the Stolons (stolones), or useless young shoots, of his vines.

We must keep this word 'stolon,' therefore, for these young suckers springing from an old root. Its derivation is uncertain; but the main idea meant by it is one of uselessness,—sprouting without occasion or fruit; and the words 'stolidus' and 'stolid' are really its derivatives, though we have lost their sense in English by partly confusing them with 'solid' which they have nothing to do with. A 'stolid' person is essentially a 'useless sucker' of society; frequently very leafy and graceful, but with no good in him.

19. Nevertheless, I won't allow our vegetable 'stolons' to be despised. Some of quite the most beautiful forms of leafage belong to them;—even the foliage of the olive itself is never seen to the same perfection on the upper branches as in the young ground-roses in which the dual groups of leaves crowd themselves in their haste into clusters of three.

But, for our point of Latin history, remember always that in 400 B.C., just a year before the death of Socrates at Athens, this family of Stolid persons manifested themselves at Rome,

shooting up from plebeian roots into places where they had no business ; and preparing the way for the degradation of the entire Roman race under the Empire ; their success being owed, remember also, to the faults of the patricians, for one of the laws passed by Calvus Stolo was that the Sibylline books should be in custody of ten men, of whom five should be plebeian, "that no falsifications might be introduced in favour of the patricians."

20. All this time, however, we have got no name for the prettiest of all stems,—that of annual flowers growing high from among their ground leaves, like lilies of the valley, and saxifrages, and the tall primulas—of which this pretty type, Fig. 15, was cut for me by Mr. Burgess years ago ; admirable in its light outline of the foamy globe of flowers, supported and balanced in the meadow breezes on that elastic rod of slenderest life.

What shall we call it ? We had better rest from our study of terms a little, and do a piece of needful classifying, before we try to name it.

21. My younger readers will find it easy to learn, and convenient to remember, for a beginning of their science, the names of twelve great families of cinquefoiled flowers,* of which the first group of three, is for the most part golden, the second, blue, the third, purple, and the fourth, red.

And their names, by simple lips, can be pleasantly said, or sung, in this order, the two first only being a little difficult to get over.

* The florets gathered in the daisy are cinquefoils, examined closely. No system founded on colour can be very general or unexceptionable : but the splendid purples of the pansy, and thistle, which will be made one of the lower composite groups under *Margarita*, may justify the general assertion of this order's being purple.



FIG. 15.

1	2	3	4
Roof-foil,	Lucy,	Pea,	Pink,
Rock-foil,	Blue-bell,	Pansy,	Peach,
Primrose.	Bindweed.	Daisy.	Rose.

Which even in their Latin magniloquence will not be too terrible, namely,—

1	2	3	4
Stella,	Lucia,	Alata,	Clarissa,
Francesca,	Campanula,	Viola,	Persica,
Primula.	Convoluta.	Margarita.	Rosa.

22. I do not care much to assert or debate my reasons for the changes of nomenclature made in this list. The most gratuitous is that of 'Lucy' for 'Gentian,' because the King of Macedon, from whom the flower has been so long named, was by no means a person deserving of so consecrated memory. I conceive no excuse needed for rejecting Caryophyll, one of the crudest and absurdest words ever coined by unscholarly men of science; or Papilionaceæ, which is unendurably long for pease; and when we are now writing Latin, in a sentimental temper, and wish to say that we gathered a daisy, we shall not any more be compelled to write that we gathered a 'Bellidem perennem,' or, an 'Oculum Diei.'

I take the pure Latin form, Margarita, instead of Margareta, in memory of Margherita of Cortona,* as well as of the great saint: also the tiny scatterings and sparklings of the daisy on the turf may remind us of the old use of the word 'Margaritæ,' for the minute particles of the Host sprinkled on the patina—"Has particulas *μερίδας* vocat Euchologium, *μαργαρίτας* Liturgia Chrysostomi."† My young German readers will, I hope, call the flower Gretschen,—unless they would uproot the daisies of the Rhine, lest French girls should also

* See Miss Yonge's exhaustive account of the Name, 'History of Christian Names,' vol. i., p. 265.

† (Du Cange.) The word 'Margarete' is given as heraldic English for pearl, by Lady Juliana Berners, in the book of St. Albans.

count their love-lots by the Marguerite. I must be so ungracious to my fair young readers, however, as to warn them that this trial of their lovers is a very favourable one, for, in nine blossoms out of ten, the leaves of the Marguerite are odd, so that, if they are only gracious enough to begin with the supposition that he loves them, they must needs end in the conviction of it.

23. I am concerned, however, for the present, only with my first or golden order, of which the Roof-foil, or house-leek, is called in present botany, *Sedum*, 'the squatter,' because of its way of fastening itself down on stones, or roof, as close as it can sit. But I think this an ungraceful notion of its behaviour; and as its blossoms are, of all flowers, the most sharply and distinctly star-shaped, I shall call it 'Stella' (providing otherwise, in due time, for the poor little chickweeds;) and the common stonecrop will therefore be 'Stella domestica.'

The second tribe, (at present *saxifraga*,) growing for the most part wild on rocks, may, I trust, even in Protestant botany, be named *Francesca*, after St. Francis of Assisi; not only for its modesty, and love of mountain ground, and poverty of colour and leaf; but also because the chief element of its decoration, seen close, will be found in its spots, or stigmata.

In the nomenclature of the third order I make no change.

24. Now all this group of golden-blossoming plants agree in general character of having a rich cluster of radical leaves, from which they throw up a single stalk bearing clustered blossoms; for which stalk, when entirely leafless, I intend always to keep the term 'virgula,' the 'little rod'—not painfully caring about it, but being able thus to define it with precision, if required. And these are connected with the stems of branching shrubs through infinite varieties of structure, in which the first steps of transition are made by carrying the cluster of radical leaves up, and letting them expire gradually from the rising stem: the changes of form in the leaves as they rise higher from the ground being one of quite the most interesting specific studies in every plant. I had set myself once, in a bye-study for foreground drawing, hard on this point; and began, with Mr. Burgess, a complete analysis of the foliation

of annual stems ; of which Line-studies II., III., and IV. are examples ; reduced copies, all, from the beautiful Flora Danica. But after giving two whole lovely long summer days, under the Giesbach, to the blue scabious, (' Devil's bit,') and getting in that time, only half-way up it, I gave in ; and must leave the work to happier and younger souls.

25. For these flowering stems, therefore, possessing nearly all the complex organization of a tree, but not its permanence, we will keep the word 'virga ;' and 'virgula' for those that have no leaves. I believe, when we come to the study of leaf-order, it will be best to begin with these annual virgæ, in which the leaf has nothing to do with preparation for a next year's branch. And now the remaining terms commonly applied to stems may be for the most part dispensed with ; but several are interesting, and must be examined before dismissal.

26. Indeed, in the first place, the word we have to use so often, 'stalk,' has not been got to the roots of, yet. It comes from the Greek *στῆλεχος*, (*stelechos*,) the 'holding part' of a tree, that which is like a handle to all its branches ; 'stock' is another form in which it has come down to us : with some notion of its being the mother of branches : thus, when Athena's olive was burnt by the Persians, two days after, a shoot a cubit long had sprung from the 'stelechos,' of it.

27. Secondly. Few words are more interesting to the modern scholarly and professorial mind than 'stipend.' (I have twice a year at present to consider whether I am worth mine, sent with compliments from the Curators of the University chest).—Now, this word comes from 'stips,' small pay, which itself comes from 'stipo,' to press together, with the idea of small coin heaped up in little towers or piles. But with the idea of lateral pressing together, instead of downward, we get 'stipes,' a solid log ; in Greek, with the same sense, *στιῖπος*, (*stupos*,) whence, gradually, with help from another word meaning to beat, (and a side-glance at beating of hemp,) we get our 'stupid,' the German stumph, the Scottish sumph, and the plain English 'stump.'

Refining on the more delicate sound of stipes, the Latins

got 'stipula,' the thin stem of straw : which rustles and ripples daintily in verse, associated with *spica* and *spiculum*, used of the sharp pointed ear of corn, and its fine processes of fairy shafts.

28. There are yet two more names of stalk to be studied, though, except for particular plants, not needing to be used, —namely, the Latin *cau-dex*, and *cau-lis*, both connected with the Greek *καυλός*, properly meaning a solid stalk like a handle, passing into the sense of the hilt of a sword, or quill of a pen. Then, in Latin, *caudex* passes into the sense of log, and so, of cut plank or tablet of wood ; thus finally becoming the classical 'codex' of writings engraved on such wooden tablets, and therefore generally used for authoritative manuscripts.

Lastly, 'caulis,' retained accurately in our cauliflower, contracted in 'colewort,' and refined in 'kail,' softens itself into the French 'chou,' meaning properly the whole family of thick-stalked eatable salads with spreading heads ; but these being distinguished explicitly by Pliny as 'Capitati,' 'salads with a head,' or 'Captain salads,' the mediæval French softened the 'caulis capitatus' into 'chou cabus ;'—or, to separate the round or apple-like mass of leaves from the flowery foam, 'cabus' simply, by us at last enriched and emphasized into 'cabbage.'

29. I believe we have now got through the stiffest piece of etymology we shall have to master in the course of our botany ; but I am certain that young readers will find patient work, in this kind, well rewarded by the groups of connected thoughts which will thus attach themselves to familiar names ; and their grasp of every language they learn must only be esteemed by them secure when they recognize its derivatives in these homely associations, and are as much at ease with the Latin or French syllables of a word as with the English ones ; this familiarity being above all things needful to cure our young students of their present ludicrous impression that what is simple, in English, is knowing, in Greek ; and that terms constructed out of a dead language will explain difficulties which remained insoluble in a living one.

But Greek is *not* yet dead : while if we carry our unscholarly nomenclature much further, English soon will be ; and then doubtless botanical gentlemen at Athens will for some time think it fine to describe what we used to call caryophyllaceæ, as the ἐδληφίδες.

30. For indeed we are all of us yet but school-boys, clumsily using alike our lips and brains ; and with all our mastery of instruments and patience of attention, but few have reached, and those dimly, the first level of science,—wonder.

For the first instinct of the stem,—unnamed by us yet—unthought of,—the instinct of seeking light, as of the root to seek darkness,—what words can enough speak the wonder of it.

Look. Here is the little thing, Line-study V. (A), in its first birth to us : the stem of stems ; the one of which we pray that it may bear our daily bread. The seed has fallen in the ground with the springing germ of it downwards ; with heavenly cunning the taught stem curls round, and seeks the never-seen light. Veritable 'conversion,' miraculous, called of God. And here is the oat germ, (B)—after the wheat, most vital of divine gifts ; and assuredly, in days to come, fated to grow on many a naked rock in hitherto lifeless lands, over which the glancing sheaves of it will shake sweet treasure of innocent gold.

And who shall tell us how they grow ; and the fashion of their rustling pillars—bent, and again erect, at every breeze. Fluted shaft or clustered pier, how poor of art, beside this grass-shaft—built, first to sustain the food of men, then to be strewn under their feet !

We must not stay to think of it, yet, or we shall get no farther till harvest has come and gone again. And having our names of stems now determined enough, we must in next chapter try a little to understand the different kinds of them.

The following notes, among many kindly sent me on the subject of Scottish Heraldry, seem to be the most trustworthy :

"The earliest known mention of the thistle as the national badge of Scotland is in the inventory of the effects of James III., who probably adopted it as an appropriate illustration of the royal motto, *In defence*.

"Thistles occur on the coins of James IV., Mary, James V., and James VI.; and on those of James VI. they are for the first time accompanied by the motto, *Nemo me impune lacessit*.

"A collar of thistles appears on the gold bonnet-pieces of James V. of 1539; and the royal ensigns, as depicted in Sir David Lindsay's armorial register of 1542, are surrounded by a collar formed entirely of golden thistles, with an oval badge attached.

"This collar, however, was a mere device until the institution, or, as it is generally but inaccurately called, the revival, of the order of the Thistle by James VII. (II. of England), which took place on May 29, 1687."

Date of James III.'s reign 1460—1488.

CHAPTER IX.

OUTSIDE AND IN.

1. THE elementary study of methods of growth, given in the following chapter, has been many years written, (the greater part soon after the fourth volume of 'Modern Painters'); and ought now to be rewritten entirely; but having no time to do this, I leave it with only a word or two of modification, because some truth and clearness of incipient notion will be conveyed by it to young readers, from which I can afterwards lop the errors, and into which I can graft the finer facts, better than if I had a less blunt embryo to begin with.

2. A stem, then, broadly speaking, (I had thus began the old chapter,) is the channel of communication between the leaf and root; and if the leaf can grow directly from the root there is no stem: so that it is well first to conceive of all plants as consisting of leaves and roots only, with the condition that each leaf must have its own quite particular root* somewhere.

Let a b c, Fig. 16, be three leaves, each, as you see, with its own root, and by no means dependent on other leaves for its

* Recent botanical research makes this statement more than dubitable. Nevertheless, on no other supposition can the forms and action of tree-branches, so far as at present known to me, be yet clearly accounted for.

daily bread ; and let the horizontal line be the surface of the ground. Then the plant has no stem, or an underground one. But if the three leaves rise above the ground, as in Fig. 17, they must reach their roots by elongating their stalks, and this elongation is the stem of the plant. If the outside leaves grow last, and are therefore youngest, the plant is said to grow from the outside. You know that 'ex' means out, and that 'gen' is the first syllable of Genesis (or creation), therefore the old botanists, putting an o between the two syllables, called the plants whose outside leaves grew last, Ex-o-gens. If the inside leaf grows last, and is youngest, the plant was said to grow from the inside, and from the Greek Endon, within, called an 'Endo-gen.' If these names are persisted in, the

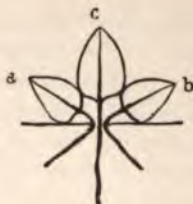


FIG. 16.

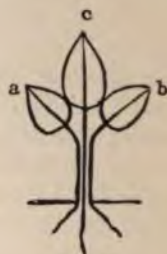


FIG. 17.

Greek botanists, to return the compliment, will of course call Endogens *Ἰνσείδβορνίδες*, and Exogens *Ἐνσείδβορνίδες*. In the Oxford school, they will be called simply Inlaid and Outlaid.

3. You see that if the outside leaves are to grow last, they may conveniently grow two at a time ; which they accordingly do, and exogens always start with two little leaves from their roots, and may therefore conveniently be called two-leaved ; which, if you please, we will for our parts call them. The botanists call them 'two-suckered,' and can't be content to call them *that* in English ; but drag in a long Greek word, meaning the fleshy sucker of the sea-devil,—'cotyledon,' which, however, I find is practically getting shortened into 'cot,' and that they will have to end by calling endogens, monocots, and

exogens, bicots. I mean steadily to call them one-leaved and two-leaved, for this further reason, that they differ not merely in the single or dual springing of first leaves from the seed ; but in the distinctly single or dual arrangement of leaves afterwards on the stem ; so that, through all the complexity obtained by alternate and spiral placing, every bicot or two-leaved flower or tree is in reality composed of dual groups of leaves, separated by a given length of stem ; as, most characteristically in this pure mountain type of the Ragged Robin (*Clarissa laciniosa*), Fig. 18 ; and compare A, and B, Lines-tudy II. ; while, on the other hand, the monocot plants are by close analysis, I think, always resolvable into successively climbing leaves, sessile on one another, and sending their roots, or processes, for nourishment, down through one another, as in Fig. 19.

4. Not that I am yet clear, at all, myself ; but I do think it's more the botanists' fault than mine, what 'cotyledonous' structure there may be at the outer base of each successive bud ; and still less, how the intervenient length of stem, in the bicots, is related to their power, or law, of branching. For not only the two-leaved tree is outlaid, and the one-leaved inlaid, but the two-leaved tree is branched, and the one-leaved tree is not branched. This is a most vital and important distinction, which I state to you in very bold terms, for though there are some apparent exceptions to the law, there are, I believe, no real ones, if we define a branch rightly. Thus, the head of a palm tree is merely a cluster of large leaves ; and the spike of a grass, a clustered blossom. The stem, in both, is unbranched ; and we should be able in this respect to classify plants very simply indeed, but for a provoking species of intermediate creatures whose branching is always in the manner of corals, or sponges, or arborescent minerals, irregular and accidental,



FIG. 18.



FIG. 19.

and essentially, therefore, distinguished from the systematic anatomy of a truly branched tree. Of these presently; we must go on by very short steps; and I find no step can be taken without check from existing generalizations. Sowerby's definition of Monocotyledons, in his ninth volume, begins thus: "Herbs, (or rarely, and only in exotic genera,) trees, in which the wood, pith, and bark are indistinguishable." Now if there be one plant more than another in which the pith is defined, it is the common Rush; while the nobler families of true herbs derive their principal character from being pithless altogether! We cannot advance too slowly.

5. In the families of one-leaved plants in which the young leaves grow directly out of the old ones, it becomes a grave question for them whether the old ones are to lie flat or edgeways, and whether they must therefore grow out of their faces or their edges. And we must at once understand the way they contrive it, in either case.



FIG. 20.

Among the many forms taken by the Arethusan leaf, one of the commonest is long and gradually tapering,—much broader at the base than the point. We will take such an one for examination, and suppose that it is growing on the ground as in Fig. 20, with a root to its every fibre. Cut out a piece of strong paper roughly into the shape of this Arethusan leaf, a, Fig. 21. Now suppose the next young leaf has to spring out of the front of this one, at about the middle of its height. Give it two nicks with the scissors at b b; then roll up the lower part into a cylinder, (it will overlap a good deal at the bottom,) and tie it fast with a fine thread: so, you will get the form at c. Then bend the top of it back, so that, seen sideways, it appears as at d, and you see you have made quite a little flower-pot to plant your new leaf in, and perhaps it may occur to you that you have seen something like this before. Now make another, a little less wide, but with the part for the cylinder twice as long, roll it up in the same way, and slip it inside the other,

with the flat part turned the other way, e. Surely this reminds you now of something you have seen? Or must I draw the something (Fig. 22)?

6. All grasses are thus constructed, and have their leaves set thus, opposite, on the sides of their tubular stems, alternately, as they ascend. But in most of them there is also a peculiar construction, by which, at the base of the sheath, or enclosing tube, each leaf articulates itself with the rest of the stem at a ringed knot, or joint.

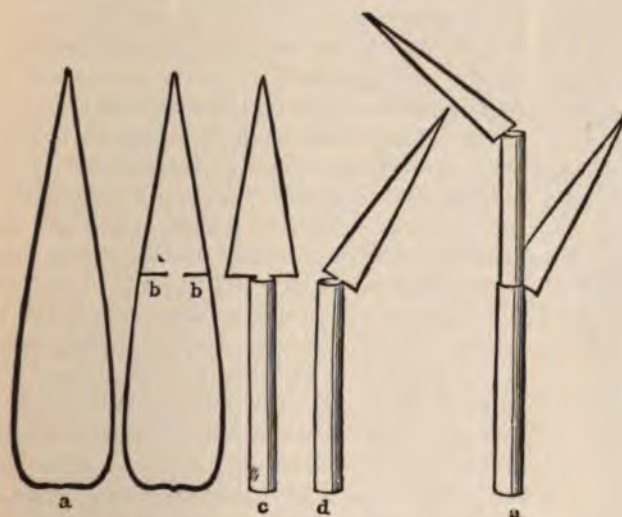


FIG. 21.

Before examining these, remember there are mainly two sorts of joints in the framework of the bodies of animals. One is that in which the bone is thick at the joints and thin between them, (see the bone of the next chicken leg you eat), the other is that of animals that have shells or horny coats, in which characteristically the shell is thin at the joints, and thick between them (look at the next lobster's claw you can see, without eating). You know, also, that though the crustaceous are titled only from their crusts, the name 'insect'

is given to the whole insect tribe, because they are farther jointed almost into sections: it is easily remembered, also, that the projecting joint means strength and elasticity in the creature, and that all its limbs are useful to it, and cannot conveniently be parted with; and that the incised, sectional,



FIG. 22.

or insectile joint means more or less weakness,* and necklace-like laxity or license in the creature's make; and an ignoble power of shaking off its legs or arms on occasion, coupled also with modes of growth involving occasionally quite astonishing transformations, and beginnings of new life under new circumstances; so that, until very lately, no mortal knew what a crab was like in its youth, the very existence of the creature, as well as its legs, being jointed, as it were, and made in separate pieces with the narrowest possible thread of connection between them; and its principal, or stomachic, period of life, connected with its sentimental period by as thin a thread as a wasp's stomach is with its thorax.

7. Now in plants, as in animals, there are just the same opposed aspects of joint, with this speciality of difference in function, that the animal's limb bends at the joints, but the vegetable limb stiffens. And when the articulation projects, as in the joint of a cane, it means not only that the strength of the plant is well carried through the junction, but is carried farther and more safely than it could be without it: a cane is stronger, and can stand higher than it could otherwise, because of its joints. Also, this structure implies that the plant has a will of its own, and a position which on the whole it will keep, however it may now and then be bent out of it; and that it has a continual battle, of a healthy and humanlike kind, to wage with surrounding elements.

* Not always in muscular power; but the framework on which strong muscles are to act, as that of an insect's wing, or its jaw, is never insectile.

But the crabby, or insect-like, joint, which you get in seaweeds and cacti, means either that the plant is to be dragged and wagged here and there at the will of waves, and to have no spring nor mind of its own ; or else that it has at least no springy intention and elasticity of purpose, but only a knobby, knotty, prickly, malignant stubbornness, and incoherent opinionativeness ; crawling about, and cogging, and grovelling, and aggregating anyhow, like the minds of so many people whom one knows !

8. Returning then to our grasses, in which the real rooting and junction of the leaves with each other is at these joints ; we find that therefore every leaf of grass may be thought of as consisting of two main parts, for which we shall want two separate names. The lowest part, which wraps itself round to become strong, we will call the 'staff,' and for the free-floating outer part we will take specially the name given at present carelessly to a large number of the plants themselves, 'flag.' This will give a more clear meaning to the words 'rod' (*virga*), and 'staff' (*baculus*), when they occur together, as in the 23rd Psalm ; and remember the distinction is that a rod bends like a switch, but a staff is stiff. I keep the well-known name 'blade' for grass-leaves in their fresh green state.

9. You felt, as you were bending down the paper into the form d, Fig. 21, the difficulty and awkwardness of the transition from the tubular form of the staff to the flat one of the flag. The mode in which this change is effected is one of the most interesting features in plants, for you will find presently that the leaf-stalk in ordinary leaves is only a means of accomplishing the same change from round to flat. But you know I said just now that some leaves were not flat, but set upright, edgeways. It is not a common position in two-leaved trees ; but if you can run out and look at an arbor vitæ, it may interest you to see its hatchet-shaped vertically crested cluster of leaves transforming themselves gradually downwards into branches ; and in one-leaved trees the vertically edged group is of great importance.

10. Cut out another piece of paper like a in Fig. 21, but

now, instead of merely giving it nicks at a, b, cut it into the shape A, Fig. 23. Roll the lower part up as before, but instead of pulling the upper part down, pinch its back at the dotted line, and bring the two points, a and b, forward, so that they may touch each other. B shows the look of the thing half-done, before the points a and b have quite met. Pinch them close, and stitch the two edges neatly together, all the way from a to the point c; then roll and tie up the

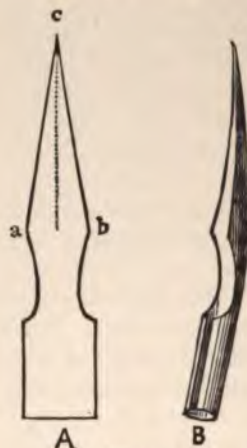


FIG. 23.

lower part as before. You will find then that the back or spinal line of the whole leaf is bent forward, as at B. Now go out to the garden and gather the green leaf of a fleur-de-lys, and look at it and your piece of disciplined paper together; and I fancy you will probably find out several things for yourself that I want you to know.

11. You see, for one thing, at once, how *strong* the fleur-de-lys leaf is, and that it is just twice as strong as a blade of grass, for it is the substance of the staff, with its sides flattened together, while the grass blade is a staff cut open and flattened out. And

you see that as a grass blade necessarily flaps down, the fleur-de-lys leaf as necessarily curves up, owing to that inevitable bend in its back. And you see, with its keen edge, and long curve, and sharp point, how like a sword it is. The botanists would for once have given a really good and right name to the plants which have this kind of leaf, 'Ensatae,' from the Latin 'ensis,' a sword; if only sata had been properly formed from sis. We can't let the rude Latin stand, but you may remember that the fleur-de-lys, which is the flower of chivalry, has a sword for its leaf, and a lily for its heart.

12. In case you cannot gather a fleur-de-lys leaf, I have drawn for you, in Plate VI., a cluster of such leaves, which are as pretty as any, and so small that, missing the points of a

few, I can draw them of their actual size. You see the pretty alternate interlacing at the bottom, and if you can draw at all, and will try to outline their curves, you will find what subtle lines they are. I did not know this name for the strong-edged grass leaves when I wrote the pieces about shield and sword leaves in 'Modern Painters'; I wish I had chanced in those passages on some other similitude, but I can't alter them now, and my trustful pupils may avoid all confusion of thought by putting *gladius for ensis*, and translating it by the word 'scymitar,' which is also more accurate in expressing the curvature blade. So we will call the *ensatæ*, instead, 'gladiolæ,' translating, 'scymitar-grasses.' And having now got at some clear idea of the distinction between outlaid and inlaid growth in the stem, the reader will find the elementary analysis of forms resulting from outlaid growth in 'Modern Painters'; and I mean to republish it in the sequel of this book, but must go on to other matters here. The growth of the inlaid stem we will follow as far as we need, for English plants, in examining the grasses.

FLORENCE, 11th September, 1874.

As I correct this chapter for press, I find it is too imperfect to be let go without a word or two more. In the first place, I have not enough, in distinguishing the nature of the living yearly shoot, with its cluster of fresh leafage, from that of the accumulated mass of perennial trees, taken notice of the similar power even of the annual shoot, to obtain some manner of immortality for itself, or at least of usefulness, *after* death. A Tuscan woman stopped me on the path up to Fiesole last night, to beg me to buy her plaited straw. I wonder how long straw lasts, if one takes care of it? A Leghorn bonnet, (if now such things are,) carefully put away,—even properly taken care of when it is worn,—how long will it last, young ladies?

I have just been reading the fifth chapter of II. Esdras, and am fain to say, with less discomfort than otherwise I might have felt, (the example being set me by the archangel Uriel,) "I am not sent to tell thee, for I do not know." How old is

the oldest straw known? the oldest linen? the oldest hemp? We have mummy wheat,—cloth of papyrus, which is a kind of straw. The paper reeds by the brooks, the flax-flower in the field, leave such imperishable frame behind them. And Ponte-della-Paglia, in Venice; and Straw Street, of Paris, remembered in Heaven,—there is no occasion to change their names, as one may have to change ‘Waterloo Bridge,’ or the ‘Rue de l’Impératrice.’ Poor Empress! Had she but known that her true dominion was in the straw streets of her fields; not in the stone streets of her cities!

But think how wonderful this imperishableness of the stem of many plants is, even in their annual work: how much more in their perennial work! The noble stability between death and life, of a piece of perfect wood? It cannot grow, but will not decay; keeps record of its years of life, but surrenders them to become a constantly serviceable thing: which may be sailed in, on the sea, built with, on the land, carved by Donatello, painted on by Fra Angelico. And it is not the wood’s fault, but the fault of Florence in not taking proper care of it, that the panel of Sandro Botticelli’s loveliest picture has cracked, (not with heat, I believe, but blighting frost), a quarter of an inch wide through the Madonna’s face.

But what is this strange state of undecaying wood? What sort of latent life has it, which it only finally parts with when it rots?

Nay, what is the law by which its natural life is measured? What makes a tree ‘old’? One sees the Spanish-chestnut trunks among the Apennines growing into caves, instead of logs. Vast hollows, confused among the recessed darknesses of the marble crags, surrounded by mere laths of living stem, each with its coronal of glorious green leaves. Why can’t the tree go on, and on,—hollowing itself into a Fairy—no—a Dryad, Ring,—till it becomes a perfect Stonehenge of a tree? Truly “I am not sent to tell thee, for I do not know.”

The worst of it is, however, that I don’t know one thing which I ought very thoroughly to have known at least thirty years ago, namely, the true difference in the way of building the trunk in outlaid and inlaid wood. I have an idea that the

stem of a palm-tree is only a heap of leaf-roots built up like a tower of bricks, year by year, and that the palm-tree really grows on the top of it, like a bunch of fern ; but I've no books here, and no time to read them if I had. If only I were a stronge giant, instead of a thin old gentleman of fifty-five, how I should like to pull up one of those little palm-trees by the roots—(by the way, what are the roots of a palm like ? and, how does it stand in sand, where it is wanted to stand, mostly ? Fancy, not knowing that, at fifty-five !)—that grow all along the Riviera ; and snap its stem in two, and cut it down the middle. But I suppose there are sections enough now in our grand botanical collections, and you can find it all out for yourself. That you should be able to ask a question clearly, is two-thirds of the way to getting it answered ; and I think this chapter of mine will at least enable you to ask some questions about the stem, though what a stem *is*, truly, “I am not sent to tell thee, for I do not know.”

KNARESBOURGH, 30th April, 1876.

I see by the date of last paragraph that this chapter has been in my good Aylesbury printer's type for more than a year and a half. At this rate, Proserpina has a distant chance of being finished in the spirit-land, with more accurate information derived from the archangel Uriel himself, (not that he is likely to know much about the matter, if he keeps on letting himself be prevented from ever seeing foliage in spring-time by the black demon-winds,) about the year 2000. In the meantime, feeling that perhaps I *am* sent to tell my readers a little more than is above told, I have had recourse to my botanical friend, good Mr. Oliver of Kew, who has taught me, first, of palms, that they actually stitch themselves into the ground, with a long dipping loop, up and down, of the root fibres, concerning which sempstress work I shall have a month's puzzlement before I can report on it ; secondly, that all the increment of tree stem is, by division and multiplication of the cells of the wood, a process not in the least to be described as ‘ sending down roots from the leaf to the ground.’ I suspected as much in beginning to revise this chapter ; but

hold to my judgment in not cancelling it. For this multiplication of the cells is at least compelled by an influence which passes from the leaf to the ground, and vice versa ; and which is at present best conceivable to me by imagining the continual and invisible descent of lightning from electric cloud by a conducting rod, endowed with the power of softly splitting the rod into two rods, each as thick as the original one. Studying microscopically, we should then see the molecules of copper, as we see the cells of the wood, dividing and increasing, each one of them into two. But the visible result, and mechanical conditions of growth, would still be the same as if the leaf actually sent down a new root fibre ; and, more than this, the currents of accumulating substance, marked by the grain of the wood, are, I think, quite plainly and absolutely those of streams flowing only from the leaves downwards ; never from the root up, nor of mere lateral increase. I must look over all my drawings again, and at tree stems again, with more separate study of the bark and pith in those museum sections, before I can assert this ; but there will be no real difficulty in the investigation. If the increase of the wood is lateral only, the currents round the knots will be compressed at the sides, and open above and below ; but if downwards, compressed above the knot and open below it. The nature of the force itself, and the manner of its ordinances in direction, remain, and must for ever remain, inscrutable as our own passions, in the hand of the God of all Spirits, and of all Flesh.

“ Drunk is each ridge, of thy cup drinking,
Each clod relenteth at thy dressing,
Thy cloud-borne waters inly sinking,
Fair spring sproutes forth, blest with thy blessing ;
The fertile year is with thy bounty crowned,
And where thou go st, thy goings fat the ground.
Plenty bedews the desert places,
A hedge of mirth the hills encloseth,
The fields with flockes have hid their faces,
A robe of corn the valleys clotheth.
Deserts and hills and fields and valleys all,
Rejoice, shout, sing, and on thy name do call.”

CHAPTER X.

THE BARK.

1. PHILOLOGISTS are continually collecting instances, like our friend the French critic of Virgil, of the beauty of finished language, or the origin of unfinished, in the imitation of natural sounds. But such collections give an entirely false idea of the real power of language, unless they are balanced by an opponent list of the words which signally fail of any such imitative virtue, and whose sound, if one dwelt upon it, is destructive of their meaning.

2. For instance. Few sounds are more distinct in their kind, or one would think more likely to be vocally reproduced in the word which signified them, than that of a swift rent in strongly woven cloth; and the English words 'rag' and ragged, with the Greek *ρίγνυμι*, do indeed in a measure recall the tormenting effect upon the ear. But it is curious that the verb which is meant to express the actual origination of rags, should rhyme with two words entirely musical and peaceful—words, indeed, which I always reserve for final resource in passages which I want to be soothing as well as pretty,—'fair,' and 'air;' while, in its orthography, it is identical with the word representing the bodily sign of tenderest passion, and grouped with a multitude of others,* in which the mere insertion of a consonant makes such wide difference of sentiment as between 'dear' and 'drear,' or 'pear' and 'spear.' The Greek root, on the other hand, has persisted in retaining some vestige of its excellent dissonance, even where it has parted with the last vestige of the idea it was meant to convey; and when Burns did his best,—and his best was above most men's

* It is one of the three cadences, (the others being of the words rhyming to 'mind' and 'way,') used by Sir Philip Sidney in his marvellous paraphrase of the 55th Psalm.

—to gather pleasant liquid and labial syllabbling, round gentle meaning, in

“ Bonnie lassie, will ye go,
Will ye go, will ye go,
Bonnie lassie, will ye go,
To the birks of Aberfeldy ? ”

he certainly had little thought that the delicately crisp final *k*, in *birk*, was the remnant of a magnificent Greek effort to express the rending of the earth by earthquake, in the wars of the giants. In the middle of that word ‘*esmaragēse*,’ we get our own beggar’s ‘*rag*’ for a pure root, which afterwards, through the Latin *frango*, softens into our ‘*break*,’ and ‘*bark*,’—the ‘*broken thing*’; that idea of its rending around the tree’s stem having been, in the very earliest human efforts at botanical description, attached to it by the pure Aryan race, watching the strips of rosy satin break from the birch stems, in the Aberfeldys of Imaus.

3. That this tree should have been the only one which “the Aryans, coming as conquerors from the North, were able to recognize in Hindostan,”* and should therefore also be “the only one whose name is common to Sanskrit, and to the languages of Europe,” delighted me greatly, for two reasons: the first, for its proof that in spite of the development of species, the sweet gleaming of birch stem has never changed its argent and sable for any unchequered heraldry; and the second, that it gave proof of a much more important fact, the keenly accurate observation of Aryan foresters at that early date; for the fact is that the breaking of the thin-beaten silver of the birch trunk is so delicate, and its smoothness so graceful, that until I painted it with care, I was not altogether clear-headed myself about the way in which the chequering was done: nor until Fors to-day brought me to the house of one of my father’s friends at Carshalton, and gave me three birch stems to look at just outside the window, did I perceive it to be a primal question about them, what it is that blanches that dainty

* Lectures on the Families of Speech, by the Rev. F. Farrer, Longman, 1870. Page 81.

dress of theirs, or, anticipatorily, weaves. What difference is there between the making of the corky excrescence of other trees, and of this almost transparent fine white linen? I perceive that the older it is, within limits, the finer and whiter; hoary tissue, instead of hoary hair—honouring the tree's aged body: the outer sprays have no silvery light on their youth. Does the membrane thin itself into whiteness merely by stretching, or produce an outer film of new substance?*

4. And secondly, this investiture, why is it transverse to the trunk,—swathing it, as it were, in bands? Above all,—when it breaks,—why does it break round the tree instead of down? All other bark breaks as anything would, naturally, round a swelling rod, but this, as if the stem were growing longer; until, indeed, it reaches farthest heroic old age, when the whiteness passes away again, and the rending is like that of other trees, downwards. So that, as it were in a changing language, we have the great botanical fact twice taught us, by this tree of Eden, that the skins of trees differ from the skins of the higher animals in that, for the most part, they won't stretch, and must be worn torn.

So that in fact the most popular arrangement of vegetative adult costume is Irish; a normal investiture in honourable rags; and decorousness of tattering, as of a banner borne in splendid ruin through storms of war.

5. Now therefore, if we think of it, we have five distinct orders of investiture for organic creatures; first, mere secretion of mineral substance, chiefly lime, into a hard shell, which, if broken, can only be mended, like china—by sticking it together; secondly, organic substance of armour which grows into its proper shape at once for good and all, and can't be mended at all, if broken, (as of insects); thirdly, organic substance of skin, which stretches, as the creature grows, by cracking, over a fresh skin which is supplied beneath it, as in bark of trees; fourthly, organic substance of skin cracked symmetrically into plates or scales which can increase all

* I only profess, you will please to observe, to ask questions in *Proserpina*. Never to answer any. But of course this chapter is to introduce some further inquiry in another place.

round their edges, and are connected by softer skin, below, as in fish and reptiles, (divided with exquisite lustre and flexibility, in feathers of birds); and lastly, true elastic skin, extended in soft unison with the creature's growth,—blushing with its blood, fading with its fear; breathing with its breath, and guarding its life with sentinel beneficence of pain.

6. It is notable, in this higher and lower range of organic beauty, that the decoration, by pattern and colour, which is almost universal in the protective coverings of the middle ranks of animals, should be reserved in vegetables for the most living part of them, the flower only: and that among animals, few but the malignant and senseless are permitted, in the corrugation of their armour, to resemble the half-dead trunk of the tree, as they float beside it in the tropical river. I must, however, leave the scale patterns of the palms and other inlaid tropical stems for after-examination,—content, at present, with the general idea of the bark of an outlaid tree as the successive accumulation of the annual protecting film, rent into ravines of slowly increasing depth, and coloured, like the rock, whose stability it begins to emulate, with the grey or gold of clinging lichen and embroidering moss.

CHAPTER XI.

GENEALOGY.

1. RETURNING, after more than a year's sorrowful interval, to my Sicilian fields,—not incognisant, now, of some of the darker realms of Proserpina; and with feebler heart, and, it may be, feebler wits, for wandering in her brighter ones,—I find what I had written by way of sequel to the last chapter somewhat difficult, and extremely tiresome. Not the less, after giving fair notice of the difficulty, and asking due pardon for the tiresomeness, I am minded to let it stand; trusting to end, with it, once for all, investigations of the kind. But in finishing this first volume of my School Botany, I must try to give the reader some notion of the plan of the book, as it



PLATE VI.—RADICAL INSERTION OF LEAVES OF ENSATÆ.
IRIS GERMANICA.

now, during the time for thinking over it which illness left me, has got itself arranged in my mind, within limits of possible execution. And this the rather, because I wish also to state, somewhat more gravely than I have yet done, the grounds on which I venture here to reject many of the received names of plants; and to substitute others for them, relating to entirely different attributes from those on which their present nomenclature is confusedly edified.

I have already in some measure given the reasons for this change;* but I feel that, for the sake of those among my scholars who have laboriously learned the accepted names, I ought now also to explain its method more completely.

2. I call the present system of nomenclature *confusedly* edified, because it introduces,—without, apparently, any consciousness of the inconsistency, and certainly with no apology for it,—names founded sometimes on the history of plants, sometimes on their qualities, sometimes on their forms, sometimes on their products, and sometimes on their poetical associations.

On their history—as ‘Gentian’ from King Gentius, and Funkia from Dr. Funk.

On their qualities—as ‘Scrophularia’ from its (quite uncertified) use in scrofula.

On their forms—as the ‘Caryophylls’ from having petals like husks of nuts.

On their products—as ‘Cocos nucifera’ from its nuts.

And on their poetical associations,—as the Star of Bethlehem from its imagined resemblance to the light of that seen by the Magi.

3. Now, this variety of grounds for nomenclature might patiently, and even with advantage, be permitted, provided the grounds themselves were separately firm, and the inconsistency of method advisedly allowed, and, in each case, justified. If the histories of King Gentius and Dr. Funk are indeed important branches of human knowledge;—if the Scrophulariaceæ do indeed cure King’s Evil;—if pinks be best described in their likeness to nuts;—and the Star of

* See Introduction, pp. 9-12.

Bethlehem verily remind us of Christ's Nativity,—by all means let these and other such names be evermore retained. But if Dr. Funk be not a person in any special manner needing either stellification or florification; if neither herb nor flower can avail, more than the touch of monarchs, against hereditary pain; if it be no better account of a pink to say it is nut-leaved, than of a nut to say it is pink-leaved; and if the modern mind, incurious respecting the journeys of wise men, has already confused, in its Bradshaw's Bible, the station of Bethlehem with that of Bethel,* it is certainly time to take some order with the partly false, partly useless, and partly forgotten literature of the Fields; and, before we bow our children's memories to the burden of it, ensure that there shall be matter worth carriage in the load.

4. And farther, in attempting such a change, we must be clear in our own minds whether we wish our nomenclature to tell us something about the plant itself, or only to tell us the place it holds in relation to other plants: as, for instance, in the Herb-Robert, would it be well to christen it, shortly, 'Rob Roy,' because it is pre-eminently red, and so have done with it;—or rather to dwell on its family connections, and call it 'Macgregoraceous'?

5. Before we can wisely decide this point, we must resolve whether our botany is intended mainly to be useful to the vulgar, or satisfactory to the scientific élite. For if we give names characterizing individuals, the circle of plants which any country possesses may be easily made known to the children who live in it: but if we give names founded on the connexion between these and others at the Antipodes, the parish school-master will certainly have double work; and it may be doubted greatly whether the parish school-boy, at the end of the lecture, will have half as many ideas.

6. Nevertheless, when the features of any great order of plants are constant, and, on the whole, represented with great clearness both in cold and warm climates, it may be desirable to express this their citizenship of the world in definite nomenclature. But my own method, so far as hitherto developed,

* See Sowerby's nomenclature of the flower, vol. ix., plate 1703.



PLATE VII.—*CONTORTA PURPUREA*. PURPLE WREATH-WORT.

consists essentially in fastening the thoughts of the pupil on the special character of the plant, in the place where he is likely to see it; and therefore, in expressing the power of its race and order in the wider world, rather by reference to mythological associations than to botanical structure.

7. For instance, Plate VII. represents, of its real size, an ordinary spring flower in our English mountain fields. It is an average example,—not one of rare size under rare conditions,—rather smaller than the average, indeed, that I might get it well into my plate. It is one of the flowers whose names I think good to change; but I look carefully through the existing titles belonging to it and its fellows, that I may keep all I expediently can. I find, in the first place, that Linnæus called one group of its relations, Ophryds, from Ophrys,—Greek for the eyebrow,—on account of their resemblance to the brow of an animal frowning, or to the overshadowing casque of a helmet. I perceive this to be really a very general aspect of the flower; and therefore, no less than in respect to Linnæus, I adopt this for the total name of the order, and call them ‘Ophrydæ,’ or, shortly, ‘Ophryds.’

8. Secondly: so far as I know these flowers myself, I perceive them to fall practically into three divisions,—one, growing in English meadows and Alpine pastures, and always adding to their beauty; another, growing in all sorts of places, very ugly itself, and adding to the ugliness of its indiscriminated haunts; and a third, growing mostly up in the air, with as little root as possible, and of gracefully fantastic forms, such as this kind of nativity and habitation might presuppose. For the present, I am satisfied to give names to these three groups only. There may be plenty of others which I do not know, and which other people may name, according to their knowledge. But in all these three kinds known to me, I perceive one constant characteristic to be *some* manner of *distortion*; and I desire that fact,—marking a spiritual (in my sense of the word) character of extreme mystery,—to be the first enforced on the mind of the young learner. It is exhibited to the English child, primarily, in the form of the stalk of each

flower, attaching it to the central virga. This stalk is always twisted once and a half round, as if somebody had been trying to wring the blossom off; and the name of the family, in Proserpina, will therefore be 'Contorta'* in Latin, and 'Wreathewort' in English.

Farther: the beautiful power of the one I have drawn in its spring life, is in the opposition of its dark purple to the primrose in England, and the pale yellow anemone in the Alps. And its individual name will be, therefore, 'Contorta purpurea'—*Purple Wreathewort*.

And in drawing it, I take care to dwell on this strength of its colour, and to show thoroughly that it is a *dark* blossom,† before I trouble myself about its minor characters.

9. The second group of this kind of flowers live, as I said, in all sorts of places; but mostly, I think, in disagreeable ones,—torn and irregular ground, under alternations of unwholesome heat and shade, and among swarms of nasty insects. I cannot yet venture on any bold general statement about them, but I think that is mostly their way; and at all events, they themselves are in the habit of dressing in livid and unpleasant colours; and are distinguished from all other flowers by twisting, not only their stalks, but one of their petals, not once and a half only, but two or three times round, and putting it far out at the same time, as a foul jester would put out his tongue: while also the singular power of grotesque mimicry, which, though strong also in the other groups of their race, seems in the others more or less playful, is, in these, definitely degraded, and, in aspect, malicious.

10. Now I find the Latin name 'Satyrium' attached already to one sort of these flowers; and we cannot possibly have a better one for all of them. It is true that, in its first Greek form, Dioscorides attaches it to a white, not a livid, flower; and I dare say there are some white ones of the breed: but, in its full sense, the term is exactly right for the entire group

* Linnaeus used this term for the oleanders; but evidently with less accuracy than usual.

† "ἄνθη πορφυροειδῆ" says Dioscorides, of the race generally,—but "ἄνθη δὲ ὑποπόφυρα" of this particular one.

of ugly blossoms of which the characteristic is the spiral curve and protraction of their central petal: and every other form of Satyric ugliness which I find among the Ophryds, whatever its colour, will be grouped with them. And I make them central, because this humour runs through the whole order, and is, indeed, their distinguishing sign.

11. Then the third group, living actually in the air, and only holding fast by, without nourishing itself from, the ground, rock, or tree-trunk on which it is rooted, may of course most naturally and accurately be called 'Aeria,' as it has long been popularly known in English by the name of Air-plant.

Thus we have one general name for all these creatures, 'Ophryd'; and three family or group names, Contorta, Satyrium, and Aeria,—every one of these titles containing as much accurate fact about the thing named as I can possibly get packed into their syllables; and I will trouble my young readers with no more divisions of the order. And if their parents, tutors, or governors, after this fair warning, choose to make them learn, instead, the seventy-seven different names with which botanist-heraldries have beautifully ennobled the family,—all I can say is, let them at least begin by learning them themselves. They will be found in due order in pages 1084, 1085 of Loudon's *Cyclopædia*.*

12. But now, farther: the student will observe that the name of the total order is Greek; while the three family are ones Latin, although the central one is originally Greek also.

I adopt this as far as possible for a law through my whole plant nomenclature.

*I offer a sample of two dozen for good papas and mammas to begin with:—

Angraecum.	Corallorrhiza.	Ornithidium.	Prescotia.
Anisopetalum.	Cryptarrhena.	Ornithocephalus.	Renanthera.
Brassavola.	Eulophia.	Platanthera.	Rodriguezia.
Brassia.	Gymnadenia.	Pleurothallis.	Stenorhynchus.
Caelogyne.	Microstylis.	Pogonia.	Trizeuxis.
Calopogon.	Octomeria.	Polystachya.	Xylobium.

13. Farther: the terminations of the Latin family names will be, for the most part, of the masculine, feminine, and neuter forms, *us*, *a*, *um*, with these following attached conditions.

(i.) Those terminating in '*us*,' though often of feminine words, as the central Arbor, will indicate either real masculine strength (*quercus*, *laurus*), or conditions of dominant majesty (*cedrus*), of stubbornness and enduring force (*crataegus*), or of peasant-like commonalty and hardship (*juncus*); softened, as it may sometimes happen, into gentleness and beneficence (*thymus*). The occasional forms in '*er*' and '*il*' will have similar power (*acer*, *basil*).

(ii.) Names with the feminine termination '*a*,' if they are real names of girls, will always mean flowers that are perfectly pretty and perfectly good (*Lucia*, *Viola*, *Margarita*, *Clarissa*). Names terminating in '*a*' which are not also accepted names of girls, may sometimes be none the less honourable, (*Primula*, *Campanula*), but for the most part will signify either plants that are only good and worthy in a nursery sort of way, (*Salvia*), or that are good without being pretty, (*Lavandula*), or pretty without being good, (*Kalmia*). But no name terminating in '*a*' will be attached to a plant that is neither good nor pretty.

(iii.) The neuter names terminating in '*um*' will always indicate some power either of active or suggestive evil, (*Conium*, *Solanum*, *Satyrium*), or a relation, more or less definite, to death; but this relation to death may sometimes be noble, or pathetic,—“which to-day is, and to-morrow is cast into the oven,”—*Lilium*.

But the leading position of these neuters in the plant's double name must be noticed by students unacquainted with Latin, in order to distinguish them from plural genitives, which will always, of course, be the second word, (*Francesca Fontium*, *Francesca of the Springs*.)

14. Names terminating in '*is*' and '*e*,' if definitely names of women, (*Iris*, *Amaryllis*, *Alcestis*, *Daphne*), will always signify flowers of great beauty, and noble historic association. If not definitely names of women, they will yet indicate

some specialty of sensitiveness, or association with legend (Berberis, Clematis.) No neuters in 'e' will be admitted.

15. Participial terminations (Impatiens), with neuters in 'en' (Cyclamen), will always be descriptive of some special quality or form,—leaving it indeterminate if good or bad, until explained. It will be manifestly impossible to limit either these neuters, or the feminines in 'is' to Latin forms; but we shall always know by their termination that they cannot be generic names, if we are strict in forming these last on a given method.

16. How little method there is in our present formation of them, I am myself more and more surprised as I consider. A child is shown a rose, and told that he is to call every flower like that, 'Rosaceous';* he is next shown a lily, and told that he is to call every flower like that, 'Liliaceous';—so far well; but he is next shown a daisy, and is not at all allowed to call every flower like that 'Daisaceous,' but he must call it, like the fifth order of architecture, 'Composite'; and being next shown a pink, he is not allowed to call other pinks 'Pinkaceous,' but 'Nut-leafed'; and being next shown a pease-blossom, he is not allowed to call other pease-blossoms 'Peasaceous,' but, in a brilliant burst of botanical imagination, he is incited to call it by two names instead of one, 'Butterfly-aceous' from its flower, and 'Pod-aceous' from its seed;—the inconsistency of the terms thus enforced upon him being perfected in their inaccuracy, for a daisy is not one whit more composite than Queen of the meadow, or Jura Jacinth;† and 'legumen' is not Latin for a pod, but 'siliqua,'—so that no good scholar could remember Virgil's 'siliqua quassante legumen,' without overthrowing all his Pisan nomenclature.

17. Farther. If we ground our names of the higher orders on the distinctive characters of *form* in plants, these are so many, and so subtle, that we are at once involved in more investigations than a young learner has ever time to follow successfully, and they must be at all times liable to disloca-

* Compare Chapter V., § 7.

† "Jacinthus Juræ," changed from "Hyacinthus Comosus."

tions and rearrangements on the discovery of any new link in the infinitely entangled chain. But if we found our higher nomenclature at once on historic fact, and relative conditions of climate and character, rather than of form, we may at once distribute our flora into unalterable groups, to which we may add at our pleasure, but which will never need disturbance; far less, reconstruction.

18. For instance,—and to begin,—it is an historical fact that for many centuries the English nation believed that the Founder of its religion, spiritually, by the mouth of the King who spake of all herbs, had likened himself to two flowers,—the Rose of Sharon, and Lily of the Valley. The fact of this belief is one of the most important in the history of England,—that is to say, of the mind or heart of England: and it is connected solemnly with the heart of Italy also, by the closing cantos of the *Paradiso*.

I think it well therefore that our two first generic, or at least commandant, names heading the out-laid and in-laid divisions of plants, should be of the rose and lily, with such meaning in them as may remind us of this fact in the history of human mind.

It is also historical that the personal appearing of this Master of our religion was spoken of by our chief religious teacher in these terms: "The Grace of God, that bringeth salvation, hath appeared unto all men." And it is a constant fact that this 'grace' or 'favor' of God is spoken of as "giving us to eat of the Tree of Life."

19. Now, comparing the botanical facts I have to express, with these historical ones, I find that the rose tribe has been formed among flowers, not in distant and monstrous geologic *eras*, but in the human epoch;—that its 'grace' or favor has been in all countries so felt as to cause its acceptance everywhere for the most perfect physical type of womanhood;—and that the characteristic fruit of the tribe is so sweet, that it has become symbolic at once of the subtlest temptation, and the kindest ministry to the earthly passion of the human race. "Comfort me with apples, for I am sick of love."

20. Therefore I shall call the entire order of these flowers

'Charites,' (Graces), and there will be divided into these five genera, *Rosa*, *Persica*, *Pomum*, *Rubra*, and *Fragaria*. Which sequence of names I do not think the young learner will have difficulty in remembering; nor in understanding why I distinguish the central group by the fruit instead of the flower. And if he once clearly master the structure and relations of these five genera, he will have no difficulty in attaching to them, in a satellitic or subordinate manner, such inferior groups as that of the Silver-weed, or the Tormentilla; but all he will have to learn by heart and rote, will be these six names; the Greek Master-name, *Charites*, and the five generic names, in each case belonging to plants, as he will soon find, of extreme personal interest to him.

21. I have used the word 'Order' as the name of our widest groups, in preference to 'Class,' because these widest groups will not always include flowers like each other in form, or equal to each other in vegetative rank; but they will be 'Orders,' literally like those of any religious or chivalric association, having some common link rather intellectual than national,—the *Charites*, for instance, linked by their kindness,—the *Oreïades*, by their mountain seclusion, as Sisters of Charity or Monks of the *Chartreuse*, irrespective of ties of relationship. Then, beneath these orders will come, what may be rightly called, either as above in Greek derivation, 'Genera,' or in Latin, 'Gentes,' for which, however, I choose the Latin word, because *Genus* is disagreeably liable to be confused on the ear with 'genius'; but *Gens*, never; and also 'nomen gentile' is a clearer and better expression than 'nomen generosum,' and I will not coin the barbarous one, 'Genericum.' The name of the *Gens*, (as '*Lucia*,') with an attached epithet, as '*Verna*,' will, in most cases, be enough to characterize the individual flower; but if farther subdivision be necessary, the third order will be that of Families, indicated by a 'nomen familiare' added in the third place of nomenclature, as *Lucia Verna*,—*Borealis*; and no farther subdivision will ever be admitted. I avoid the word 'species'—originally a bad one, and lately vulgarized beyond endurance—altogether. And varieties belonging to narrow locali-

ties, or induced by horticulture, may be named as they please by the people living near the spot, or by the gardener who grows them; but will not be acknowledged by Proserpina. Nevertheless, the arbitrary reduction under Ordines, Gentes, and Familiæ, is always to be remembered as one of massive practical convenience only; and the more subtle arborescence of the infinitely varying structures may be followed, like a human genealogy, as far as we please, afterwards; when once we have got our common plants clearly arranged and intelligibly named.

22. But now we find ourselves in the presence of a new difficulty, the greatest we have to deal with in the whole matter.

One new nomenclature, to be thoroughly good, must be acceptable to scholars in the five great languages, Greek, Latin, French, Italian, and English; and it must be acceptable by them in teaching the native children of each country. I shall not be satisfied, unless I can feel that the little maids who gather their first violets under the Acropolis rock, may receive for them Æschylean words again with joy. I shall not be content, unless the mothers watching their children at play in the Ceramicus of Paris, under the scarred ruins of her Kings' palace, may yet teach them there to know the flowers which the Maid of Orleans gathered at Domremy. I shall not be satisfied unless every word I ask from the lips of the children of Florence and Rome, may enable them better to praise the flowers that are chosen by the hand of Matilda,* and bloom around the tomb of Virgil.

23. Now in this first example of nomenclature, the Master-name, being *pure* Greek, may easily be accepted by Greek children, remembering that certain also of their own poets, if they did not call the flower a Grace itself, at least thought of it as giving gladness to the Three in their dances.† But for French children the word 'Grâce' has been doubly and trebly corrupted; first, by entirely false theological scholarship,

* "Cantando, e scegliendo fior di fiore

Onde era picta tutta la sua via."—*Purg.*, xxviii. 35.

† "καὶ θεοῖσι τεύχεα."

mistaking the 'Favor' or Grace done by God to good men, for the 'Misericordia,' or mercy, shown by Him to bad ones; and so, in practical life, finally substituting 'Grâce' as a word of extreme and mortal prayer, for 'Merci,' and of late using 'Merci' in a totally ridiculous and perverted power, for the giving of thanks (or refusal of offered good): while the literally derived word 'Charite' has become, in the modern mind, a gift, whether from God or man, only to the wretched, never to the happy: and lastly, 'Grâce' in its physical sense has been perverted, by their social vulgarity, into an idea, whether with respect to form or motion, commending itself rather to the ballet-master than either to the painter or the priest.

For these reasons, the Master name of this family, for my French pupils, must be simply 'Rhodiades,' which will bring, for them, the entire group of names into easily remembered symmetry; and the English form of the same name, Rhodiad, is to be used by English scholars also for all tribes of this group except the five principal ones.

24. Farther, in every gens of plants, one will be chosen as the representative, which, if any, will be that examined and described in the course of this work, if I have opportunity of doing so.

This representative flower will always be a wild one, and of the simplest form which completely expresses the character of the plant; existing divinely and unchangeably from age to age, ungrieved by man's neglect, and inflexible by his power.

And this divine character will be expressed by the epithet 'Sacred,' taking the sense in which we attach it to a dominant and christened majesty, when it belongs to the central type of any forceful order;—'Quercus sacra,' 'Laurus sacra,' etc.,—the word 'Benedicta,' or 'Benedictus,' being used instead, if the plant be too humble to bear, without some discrepancy and unbecomingness, the higher title; as 'Carduus Benedictus,' Holy Thistle.

25. Among the gentes of flowers bearing girls' names, the dominant one will be simply called the Queen, 'Rose Regina,' 'Rose the Queen' (the English wild rose); 'Clarissa Regina,' 'Clarissa the Queen' (Mountain Pink); 'Lucia Regina,'

'Lucy the Queen' (Spring Gentian), or in simpler English, 'Lucy of Teesdale,' as 'Harry of Monmouth.' The ruling flowers of groups which bear names not yet accepted for names of girls, will be called simply 'Domina,' or shortly 'Donna.' 'Rubra domina' (wild raspberry): the wild strawberry, because of her use in heraldry, will bear a name of her own, exceptional, 'Cora coronalis.

26. These main points being understood, and concessions made, we may first arrange the greater orders of land plants in a group of twelve, easily remembered, and with very little forcing. There must be *some* forcing always to get things into quite easily tenable form, for Nature always has her ins and outs. But it is curious how fitly and frequently the number of twelve may be used for *memoria technica*; and in this instance the Greek derivative names fall at once into harmony with the most beautiful parts of Greek mythology, leading on to early Christian tradition.

27. Their series will be, therefore, as follows: the principal subordinate groups being at once placed under each of the great ones. The reasons for occasional appearance of inconsistency will be afterwards explained, and the English and French forms given in each case are the terms which would be used in answering the rapid question, 'Of what order is this flower?' the answer being, It is a 'Cyllenid,' a 'Pleiad,' or a 'Vestal,' as one would answer of a person, he is a Knight of St. John or Monk of St. Benedict; while to the question, of what gens, we answer, a Stella or an Erica, as one would answer of a person, a Stuart or Plantagenet.

I. CHARITES.

ENG. CHARIS. FR. RHODIADE.

Rosa. Persica. Pomum. Rubra. Fragaria.

II. URANIDES.

ENG. URANID. FR. URANIDE.

Lucia. Campanula. Convoluta.

III. CYLLENIDES.

ENG. CYLLENID. FR. NEPHELIDE.
Stella. Francesca. Primula.

IV. OREIADES.

ENG. OREIAD. FR. OREADE.
Erica. Myrtilla. Aurora.

V. PLEIADES.

ENG. PLEIAD. FR. PLEIADE.
Silvia. Anemone.

VI. ARTEMIDES.

ENG. ARTEMID. FR. ARTEMIDE.
Clarissa. Lychnis. Scintilla. Mica.

VII. VESTALES.

ENG. VESTAL. FR. VESTALE.
Mentha. Melitta. Basil. Salvia. Lavandula. Thymus.

VIII. CYTHERIDES.

ENG. CYTHERID. FR. CYTHERIDE.
Viola. Veronica. Giulietta.

IX. HELIADES.

ENG. ALCESTID. FR. HELIADE.
Clytia. Margarita. Alcestis. Falconia. Carduus.

X. DELPHIDES.

ENG. DELPHID. FR. DELPHIDE.
Laurus. Granata. Myrtus.

XI. HESPERIDES.

ENG. HESPERID. FR. HESPERIDE.
Aurantia. Aglee.

XII. ATHENAIDES.

ENG. ATHENAID. FR. ATHENAIDE.
Olea. Fraxinus.

I will shortly note the changes of name in their twelve orders, and the reasons for them.

I. CHARITES.—The only change made in the nomenclature of this order is the slight one of 'rubra' for 'rubus': partly to express true sisterhood with the other Charites; partly to enforce the idea of redness, as characteristic of the race, both in the lovely purple and russet of their winter leafage, and in the exquisite bloom of scarlet on the stems in strong young shoots. They have every right to be placed among the Charites, first because the raspberry is really a more important fruit in domestic economy than the strawberry; and, secondly, because the wild bramble is often in its wandering sprays even more graceful than the rose; and in blossom and fruit the best autumnal gift that English Nature has appointed for her village children.

II. URANIDES.—Not merely because they are all of the color of the sky, but also sacred to Urania in their divine purity. 'Convoluta' instead of 'convolvulus,' chiefly for the sake of euphony; but also because pervinca is to be included in this group.

III. CYLLENIDES.—Named from Mount Cyllene in Arcadia, because the three races included in the order alike delight in rocky ground, and in the cold or moist air of mountain-clouds.

IV. ORELADES.—Described in next chapter.

V. PLEIADES.—From the habit of the flowers belonging to this order to get into bright local clusters. Silvia, for the wood-sorrel, will, I hope, be an acceptable change to my girl-readers.

VI. ARTEMIDES.—Dedicate to Artemis for their expression of energy, no less than purity. This character was rightly felt in them by whoever gave the name 'Dianthus' to their leading race; a name which I should have retained if it had not been bad Greek. I wish them, by their name 'Clarissa' to recall the memory of St. Clare, as 'Francesca' that of St. Francis.* The 'issa,' not without honour to the greatest of

* The four races of this order are more naturally distinct than botanists have recognized. In Clarissa, the petal is cloven into a fringe at

our English moral story-tellers, is added for the practical reason, that I think the sound will fasten in the minds of children the essential characteristic of the race, the cutting of the outer edge of the petal as if with scissors.

VII. VESTALES.—I allow this Latin form, because Hestiades would have been confused with Heliades. The order is named 'of the hearth,' from its manifold domestic use, and modest blossoming.

VIII. CYTHERIDES.—Dedicate to Venus, but in all purity and peace of thought. Giulietta, for the coarse, and more than ordinarily false, Polygala.

IX. HELIADES.—The sun-flowers.* In English, Alcecid, in honor to Chaucer and the Daisy.

X. DELPHIDES.—Sacred to Apollo. Granata, changed from Punica, in honor to Granada and the Moors.

XI. HESPERIDES.—Already a name given to the order. Aegle, prettier and more classic than Limonia, includes the idea of brightness in the blossom.

XII. ATHENAIDES.—I take Fraxinus into this group, because the mountain ash, in its hawthorn-scented flower, scarletest of berries, and exquisitely formed and finished leafage, belongs wholly to the floral decoration of our native rocks, and is associated with their human interests, though lightly, not less spiritually, than the olive with the mind of Greece.

28. The remaining groups are in great part natural; but I the outer edge; in *Lychnis*, the petal is terminated in two rounded lobes and the fringe withdrawn to the top of the limb; in *Scintilla*, the petal is divided into two *sharp* lobes, without any fringe of the limb; and in *Mica*, the minute and scarcely visible flowers have simple and far separate petals. The confusion of these four great natural races under the vulgar or accidental botanical names of spittle-plant, shore-plant, sand-plant, etc., has become entirely intolerable by any rational student; but the names '*Scintilla*,' substituted for *Stellaria*, and '*Mica*' for the utterly ridiculous and probably untrue *Sagina*, connect themselves naturally with *Lychnis*, in expression of the luminous power of the white and sparkling blossoms.

* *Clytia* will include all the true sun-flowers, and *Falconia* the hawkweeds; but I have not yet completed the analysis of this vast and complex order, so as to determine the limits of *Margarita* and *Alcecid*.

separate for subsequent study five orders of supreme domestic utility, the Mallows, Currants, Pease,* Cresses, and Cranesbills, from those which, either in fruit or blossom, are for finer pleasure or higher beauty. I think it will be generally interesting for children to learn those five names as an easy lesson, and gradually discover, wondering, the world that they include. I will give their terminology at length, separately.

29. One cannot, in all groups, have all the divisions of equal importance; the Mallows are only placed with the other four for their great value in decoration of cottage gardens in autumn: and their softly healing qualities as a tribe. They will mentally connect the whole useful group with the three great *Æsculapiadæ*, *Cinchona*, *Coffea*, and *Camellia*.

30. Taking next the water-plants, crowned in the *DROSIDÆ*, which include the five great families, *Juncus*, *Jacinthus*, *Amaryllis*, *Iris*, and *Lilium*, and are masculine in their Greek name because their two first groups, *Juncus* and *Jacinthus*, are masculine, I gather together the three orders of *TRITONIDES*, which are notably trefoil; the *NAIADES*, notably quatrefoil, but for which I keep their present pretty name; and the *BATRACHIDES*,† notably cinquefoil, for which I keep their present ugly one, only changing it from Latin into Greek.

31. I am not sure of being forgiven so readily for putting the Grasses, Sedges, Mosses, and Lichens together, under the great general head of *Demetridæ*. But it seems to me the mosses and lichens belongs no less definitely to *Demeter*, in being the first gatherers of earth on rock, and the first coverers of its sterile surface, than the grass which at last prepares it to the foot and to the food of man. And with the mosses I shall take all the especially moss plants which otherwise are homeless or companionless, *Drosera*, and the like, and as a connecting link with the flowers belonging to the

* The reader must observe that the positions given in this more developed system to any flower do not interfere with arrangements either formerly or hereafter given for *memoria technica*. The name of the pea, for instance (*alata*) is to be learned first among the twelve cinquefoils, p. 134, above; then transferred to its botanical place.

† The amphibious habit of this race is to me of more importance than its outlaid structure.

Dark Kora, the two strange orders of the Ophryds and Agarics.

32. Lastly will come the orders of flowers which may be thought of as belonging for the most part to the Dark Kora of the lower world,—having at least the power of death, if not its terror, given them, together with offices of comfort and healing in sleep, or of strengthening, if not too prolonged, action on the nervous power of life. Of these, the first will be the DIONYSIDÆ,—Hedera, Vitis, Liana ; then the DRACONIDÆ,—Atropa, Digitalis, Linaria ; and, lastly, the MOIRIDÆ,—Conium, Papaver, Solanum, Arum and Nerium.

33. As I see this scheme now drawn out, simple as it is, the scope of it seems not only far too great for adequate completion by my own labour, but larger than the time likely to be given to botany by average scholars would enable them intelligently to grasp : and yet it includes, I suppose, not the tenth part of the varieties of plants respecting which, in competitive examination, a student of physical science is now expected to know, or at least assert on hearsay, *something*.

So far as I have influence with the young, myself, I would pray them to be assured that it is better to know the habits of one-plant than the names of a thousand ; and wiser to be happily familiar with those that grow in the nearest field, than arduously cognisant of all that plume the isles of the Pacific, or illumine the Mountains of the Moon.

Nevertheless, I believe that when once the general form of this system in Proserpina has been well learned, much other knowledge may be easily attached to it, or sheltered under the eaves of it : and in its own development, I believe everything may be included that the student will find useful, or may wisely desire to investigate, of properly European botany. But I am convinced that the best results of his study will be reached by a resolved adherence to extreme simplicity of primal idea, and primal nomenclature.

34. I do not think the need of revisal of our present scientific classification could be more clearly demonstrated than by the fact that laurels and roses are confused, even by Dr. Lindley, in the mind of his feminine readers ; the English word

laurel, in the index to his first volume of *Ladies' Botany*, referring them to the cherries, under which the common laurel is placed as '*Prunus Laurocerasus*,' while the true laurel, '*Laurus nobilis*,' must be found in the index of the second volume, under the Latin form '*Laurus*.'

This accident, however, illustrates another, and a most important point to be remembered, in all arrangements whether of plants, minerals, or animals. No single classification can possibly be perfect, or anything *like* perfect. It must be, at its best, a ground, or *warp* of arrangement only, through which, or over which, the cross threads of another,—yes, and of many others,—must be woven in our minds. Thus the almond, though in the form and colour of its flower, and method of its fruit, rightly associated with the roses, yet by the richness and sweetness of its kernel must be held mentally connected with all plants that bear nuts. These assuredly must have something in their structure common, justifying their being gathered into a conceived or conceivable group of '*Nuciferae*,' in which the almond, hazel, walnut, cocoa-nut, and such others would be considered as having relationship, at least in their power of secreting a crisp and sweet substance which is not wood, nor bark, nor pulp, nor seed-pabulum reducible to softness by boiling ;—but quite separate substance, for which I do not know that there at present exists any botanical name,—of which, hitherto, I find no general account, and can only myself give so much, on reflection, as that it is crisp and close in texture, and always contains some kind of oil or milk.

35. Again, suppose the arrangement of plants could with respect to their flowers and fruits, be made approximately complete, they must instantly be broken and reformed by comparison of their stems and leaves. The three *creeping* families of the Charities,—*Rosa*, *Rubra*, and *Fragaria*,—must then be frankly separated from the elastic *Persica* and knotty *Pomum* ; of which one wild and lovely species, the hawthorn, is no less notable for the massive accumulation of wood in the stubborn stem of it, than the wild rose for her lovely power of wreathing her garlands at pleasure wherever they are

fairest, the stem following them and sustaining, where they will.

36. Thus, as we examine successively each part of any plant, new sisterhoods, and unthought-of fellowships, will be found between the most distant orders; and ravines of unexpected separation open between those otherwise closely allied. Few botanical characters are more definite than the leaf structure illustrated in Plate VI., which has given to one group of the Drosidæ the descriptive name of *Ensatæ*, (see above, Chapter IX., § 11,) but this conformation would not be wisely permitted to interfere in the least with the arrangement founded on the much more decisive floral aspects of the Iris and Lily. So, in the fifth volume of 'Modern Painters,' the sword-like, or rather rapier-like, leaves of the pine are opposed, for the sake of more vivid realization, to the shield-like leaves of the greater number of inland trees; but it would be absurd to allow this difference any share in botanical arrangement,—else we should find ourselves thrown into sudden discomfiture by the wide-waving and opening foliage of the palms and ferns.

37. But through all the defeats by which insolent endeavors to sum the orders of Creation must be reproved, and in the midst of the successes by which patient insight will be surprised, the fact of the *confirmation* of species in plants and animals must remain always a miraculous one. What outstretched sign of constant Omnipotence can be more awful, than that the susceptibility to external influences, with the reciprocal power of transformation, in the organs of the plant; and the infinite powers of moral training and mental conception over the nativity of animals, should be so restrained within impassable limits, and by inconceivable laws, that from generation to generation, under all the clouds and revolutions of heaven with its stars, and among all the calamities and convulsions of the Earth with her passions, the numbers and the names of her Kindred may still be counted for her in unfailing truth;—still the fifth sweet leaf unfold for the Rose, and the sixth spring for the Lily; and yet the wolf rave tameless round the folds of the pastoral mountains, and yet the tiger flame through the forests of the night.

CHAPTER XII.

CORA AND KRONOS.

1. OF all the lovely wild plants—and few, mountain-bred, in Britain, are other than lovely,—that fill the clefts and crest the ridges of my Brantwood rock, the dearest to me, by far, are the clusters of whortleberry which divide possession of the lower slopes with the wood hyacinth and pervenche. They are personally and specially dear to me for their association in my mind with the woods of Montanvert; but the plant itself, irrespective of all accidental feeling, is indeed so beautiful in all its ways—so delicately strong in the spring of its leafage, so modestly wonderful in the formation of its fruit, and so pure in choice of its haunts, not capriciously or unfamiliarly, but growing in luxuriance through all the healthiest and sweetest seclusion of mountain territory throughout Europe,—that I think I may without any sharp remonstrance be permitted to express for this once only, personal feeling in my nomenclature, calling it in Latin ‘*Myrtilla Cara*,’ and in French ‘*Myrtille Chérie*,’ but retaining for it in English its simply classic name, ‘Blue Whortle.’

2. It is the most common representative of the group of *Myrtillæ*, which, on reference to our classification, will be found central between the *Ericæ* and *Auroræ*. The distinctions between these three families may be easily remembered, and had better be learned before going farther; but first let us note their fellowship. They are all *Oreïades*, mountain plants; in specialty, they are all strong in stem, low in stature, and the *Ericæ* and *Auroræ* glorious in the flush of their infinitely exulting flowers, (“the rapture of the heath”—above spoken of, p. 63.) But all the essential loveliness of the *Myrtillæ* is in their leaves and fruit: the first always exquisitely finished and grouped like the most precious decorative work of sacred painting; the second, red or purple, like beads of coral or amethyst. Their minute flowers have rarely any

general part or power in the colors of mountain ground ; but, examined closely, they are one of the chief joys of the traveller's rest among the Alps ; and full of exquisiteness unspeakable, in their several bearings and miens of blossom, so to speak. Plate VIII. represents, however feebly, the proud bending back of her head by *Myrtilla Regina* : * an action as beautiful in *her* as it is terrible in the Kingly Serpent of Egypt.

3. The formal differences between these three families are trenchant and easily remembered. The *Ericæ* are all quatrefoils, and quatrefoils of the most studied and accomplished symmetry ; and they bear no berries, but only dry seeds. The *Myrtillæ* and *Auroræ* are both Cinqfoil ; but the *Myrtillæ* are symmetrical in their blossom, and the *Auroræ* unsymmetrical. Farther, the *Myrtillæ* are not absolutely determinate in the number of their foils, (this being essentially a characteristic of flowers exposed to much hardship,) and are thus sometimes quatrefoil, in sympathy with the *Ericæ*. But the *Auroræ* are strictly cinqfoil. These last are the only European form of a larger group, well named 'Azalea' from the Greek *ἀζα*, dryness, and its adjective *ἀζαλέα*, dry or parched ; and *this* name must be kept for the world-wide group, (including under it *Rhododendron*, but not *Kalmia*,) because there is an under-meaning in the word *Aza*, enabling it to be applied to the substance of dry earth, and indicating one of the great functions of the *Oreiades*, in common with the mosses,—the collection of earth upon rocks.

4. Neither the *Ericæ*, as I have just said, nor *Auroræ* bear useful fruit ; and the *Ericæ* are named from their consequent worthlessness in the eyes of the Greek farmer ; they were the plants he 'tore up' for his bed, or signal-fire, his word for them including a farther sense of crushing or bruising into a heap. The Westmoreland shepherds now, alas ! burn them remorselessly on the ground, (and a year since had nearly set the copse of Brantwood on fire just above the house.) The sense of parched and fruitless existence is

* "*Arctostaphylos Alpina*," I believe ; but scarcely recognize the flower in my botanical books.

given to the heaths, with beautiful application of the context, in our English translation of Jeremiah xvii. 6 ; but I find the plant there named is, in the Septuagint, Wild Tamarisk ; the mountains of Palestine being, I suppose, in that latitude, too low for heath, unless in the Lebanon.

5. But I have drawn the reader's thoughts to this great race of the Oreiades at present, because they place for us in the clearest light a question which I have finally to answer before closing the first volume of Proserpina ; namely, what is the real difference between the three ranks of Vegetative Humility, and Noblesse — the Herb, the Shrub, and the Tree ?

6. Between the herb, which perishes annually, and the plants which construct year after year an increasing stem, there is, of course, no difficulty of discernment ; but between the plants which, like these Oreiades, construct for themselves richest intricacy of supporting stem, yet scarcely rise a fathom's height above the earth they gather and adorn,—between these, and the trees that lift cathedral aisles of colossal shade on Andes and Lebanon,—where is the limit of kind to be truly set ?

7. We have the three orders given, as no botanist could, in twelve lines by Milton :—

“ Then herbs of every leaf, that sudden flow'r'd
Op'ning their various colours, and made gay
Her bosom smelling sweet ; and, these scarce blown,
Forth flourish'd thick the clust'ring vine, forth crept
The swelling gourd, up stood the corny reed
Embattel'd in her field ; and th' *humble shrub*,
And bush with frizzled hair implicit : last
Rose, as in dance, the stately trees, and spread
Their branches hung with copious fruits, or gemm'd
Their blossoms ; with high woods the hills were crown'd ;
With tufts the valleys and each fountain side ;
With borders long the rivers.”

Only to learn, and be made to understand, these twelve lines thoroughly would teach a youth more of true botany than an entire Cyclopædia of modern nomenclature and de-

scription : they are, like all Milton's work, perfect in accuracy of epithet, while consummate in concentration. Exquisite in touch, as infinite in breadth, they gather into their unbroken clause of melodious compass the conception at once of the Columbian prairie, the English cornfield, the Syrian vineyard, and the Indian grove. But even Milton has left untold, and for the instant perhaps unthought of, the most solemn difference of rank between the low and lofty trees, not in magnitude only, nor in grace, but in duration.

8. Yet let us pause before passing to this greater subject, to dwell more closely on what he has told us so clearly,—the difference in Grace, namely between the trees that rise 'as in dance,' and 'the bush with frizzled hair.' For the bush form is essentially one taken by vegetation in some kind of distress ; scorched by heat, discouraged by darkness, or bitten by frost ; it is the form in which isolated knots of earnest plant life stay the flux of fiery sands, bind the rents of tottering crags, purge the stagnant air of crave or chasm, and fringe with sudden hues of un hoped spring the Arctic edge of retreating desolation.

On the other hand, the trees which, as in sacred dance, make the borders of the rivers glad with their procession, and the mountain ridges statelier with their pride, are all expressions of the vegetative power in its accomplished felicities ; gathering themselves into graceful companionship with the fairest arts and serenest life of man ; and providing not only the sustenance and the instruments, but also the lessons and the delights, of that life, in perfectness of order, and unblighted fruition of season and time.

9. 'Interitura'—yet these not to-day, nor to-morrow, nor with the decline of the summer's sun. We describe a plant as small or great ; and think we have given account enough of its nature and being. But the chief question for the plant, as for the human creature, is the Number of its days ; for to the tree, as to its master, the words are forever true—"As thy Day is, so shall thy Strength be."

10. I am astonished hourly, more and more, at the apathy and stupidity which have prevented me hitherto from learn-

ing the most simple facts at the base of this question! Here is this myrtille bush in my hand—its cluster of some fifteen or twenty delicate green branches knitting themselves downwards into the stubborn brown of a stem on which my knife makes little impression. I have not the slightest idea how old it is, still less how old it might one day have been if I had not gathered it; and, less than the least, what hinders it from becoming as old as it likes! What doom is there over these bright green sprays, that they may never win to any height or space of verdure, nor persist beyond their narrow scope of years?

11. And the more I think the more I bewilder myself; for these bushes, which are pruned and clipped by the deathless Gardener into these lowly thickets of bloom, do not strew the ground with fallen branches and faded clippings in any wise,—it is the pining umbrage of the patriarchal trees that tinges the ground and betrays the foot beneath them: but, under the heather and the Alpine rose.—Well, what is under them, then? I never saw, nor thought of looking,—will look presently under my own bosquets and beds of lingering heather-blossom: beds indeed they were only a month since, a foot deep in flowers, and close in tufted cushions, and the mountain air that floated over them rich in honey like a draught of metheglin.

12. Not clipped, nor pruned, I think, after all,—nor dwarfed in the gardener's sense; but pausing in perpetual youth and strength, ordained out of their lips of roseate infancy. Rose-trees—the botanists have falsely called the proudest of them; yet not trees in any wise, they, nor doomed to know the edge of axe at their roots, nor the hoary waste of time, or searing thunder-stroke, on sapless branches. Continual morning for them, and *in* them; they themselves an Aurora, purple and cloudless, stayed on all the happy hills. That shall be our name for them, in the flushed Phœnician colour of their height, in calm or tempest of the heavenly sea; how much holier than the depth of the Tyrian! And the queen of them on our own Alps shall be 'Aurora Alpium.'*

* 'Aurora Regina,' changed from *Rhododendron Ferrugineum*.

13. There is one word in the Miltonian painting of them which I must lean on specially ; for the accurate English of it hides deep morality no less than botany. ' With hair *implicit*.' The interweaving of complex band, which knits the masses of heath or of Alpine rose into their dense tufts and spheres of flower, is to be noted both in these, and in stem structure of a higher order like that of the stone pine, for an expression of the instinct of the plant gathering itself into protective unity, whether against cold or heat, while the forms of the trees which have no hardship to sustain are uniformly based on the effort of each spray to *separate* itself from its fellows to the utmost, and obtain around its own leaves the utmost space of air.

In vulgar modern English, the term 'implicit,' used of Trust or Faith, has come to signify only its serenity. But the Miltonian word gives the *reason* of serenity : the root and branch intricacy of closest knowledge and fellowship.

14. I have said that Milton has told us more in these few lines than any botanist could. I will prove my saying by placing in comparison with them two passages of description by the most imaginative and generally well-trained scientific man since Linnaeus—Humboldt—which, containing much that is at this moment of special use to us, are curious also in the confusion even of the two orders of annual and perennial plants, and show, therefore, the extreme need of most careful initial work in this distinction of the reign of Cora from that of Kronos.

"The disk of the setting sun appeared like a globe of fire suspended over the savannah ; and its last rays, as they swept the earth, illumined the extremities of the grass, strongly agitated by the evening breeze. In the low and humid places of the equinoxial zone, even when the gramineous plants and reeds present the aspect of a meadow, of turf, a rich decoration of the picture is usually wanting. I mean that variety of wild flowers which, scarcely rising above the grass, seem to lie upon a smooth bed of verdure. Between the tropics, the strength and luxury of vegetation give such a development to plants, that the smallest of the dicotyledonous family become

shrubs.* It would seem as if the liliaceous plants, mingled with the gramina, assumed the place of the flowers of our meadows. Their form is indeed striking; they dazzle by the variety and splendor of their colours; but, too high above the soil, they disturb that harmonious relation which exists among the plants that compose our meadows and our turf. Nature in her beneficence, has given the landscape under every zone its peculiar type of beauty.

"After proceeding four hours across the savannahs, we entered into a little wood composed of shrubs and small trees, which is called El Pejual; no doubt because of the great abundance of the 'Pejoa' (*Gaultheria odorata*), a plant with very odoriferous leaves. The steepness of the mountain became less considerable, and we felt an indescribable pleasure in examining the plants of this region. Nowhere, perhaps, can be found collected together in so small a space of ground, productions so beautiful, and so remarkable in regard to the geography of plants. At the height of a thousand toises the lofty savannahs of the hills terminate in a zone of shrubs, which by their appearance, their tortuous branches, their stiff leaves, and the dimensions and beauty of their purple flowers, remind us of what is called in the Cordilleras of the Andes the vegetation of the *paramos*† and the *punas*. We find there the family of the Alpine rhododendrons, the thibaudias, the andromedas, the vacciniums, and those befarias‡ with resinous leaves, which we have several times compared to the rhododendron of our European Alps.

"Even when nature does not produce the same species in analogous climates, either in the plains of isothermal parallels, or on table-lands the temperature of which resembles that of places nearer the poles, we still remark a striking resem-

* I do not see what this can mean. Primroses and cowslips can't become shrubs; nor can violets, nor daisies, nor any other of our pet meadow flowers.

† 'Deserts.' *Punas* is not in my Spanish dictionary, and the reference to a former note is wrong in my edition of Humboldt, vol. iii., p. 490.

‡ "The Alpine rose of equinoctial America," p. 453.

blance of appearance and physiognomy in the vegetation of the most distant countries. This phenomenon is one of the most curious in the history of organic forms. I say the history; for in vain would reason forbid man to form hypotheses on the origin of things: he is not the less tormented with these insoluble problems of the distribution of beings."

15. Insoluble—yes, assuredly, poor little beaten phantasms of palpitating clay that we are—and who asked us to solve it? Even this Humboldt, quiet-hearted and modest watcher of the ways of Heaven, in the real make of him, came at last to be so far puffed up by his vain science in declining years that he must needs write a Kosmos of things in the Universe, forsooth, as if he knew all about them! when he was not able meanwhile, (and does not seem even to have desired the ability,) to put the slightest Kosmos into his own 'Personal Narrative'; but leaves one to gather what one wants out of its wild growth; or rather, to wash or winnow what may be useful out of its débris, without any vestige either of reference or index; and I must look for these fragmentary sketches of heath and grass through chapter after chapter about the races of the Indian and religion of the Spaniard,—these also of great intrinsic value, but made useless to the general reader by interspersed experiment on the drifts of the wind and the depths of the sea.

16. But one more fragment out of a note (vol. iii., p. 494) I must give, with reference to an order of the Rhododendrons as yet wholly unknown to me.

"The name of vine tree, 'uvas camaronas' (Shrimp grapes?) is given in the Andes to plants of the genus *Thibaudia* on account of their *large succulent fruit*. Thus the ancient botanists give the name of Bear's vine, 'Uva Ursi,' and vine of Mount Ida, 'Vitis Idea,' to an *Arbutus* and *Myrtillus* which belong, like the *Thibaudia*, to the family of the *Ericineæ*."

Now, though I have one entire bookcase and half of another, and a large cabinet besides, or about fifteen feet square of books on botany beside me here, and a quantity more at Oxford, I have no means whatever, in all the heap, of finding out what a *Thibaudia* is like. Loudon's *Cyclopædia*, the only

general book I have, tells me only that it will grow well in camellia houses, that its flowers develop at Christmas, and that they are beautifully varied like a fritillary: whereupon I am very anxious to see them, and taste their fruit, and be able to tell my pupils something intelligible of them,—a new order, as it seems to me, among my Oreiades. But for the present I can make no room for them, and must be content, for England and the Alps, with my single class, Myrtilla, including all the fruit-bearing and (more or less) myrtle-leaved kinds; and Azalea for the fruitless flushing of the loftier tribes; taking the special name 'Aurora' for the red and purple ones of Europe, and resigning the already accepted 'Rhodora' to those of the Andes and Himalaya.

17. Of which also, with help of earnest Indian botanists, I hope nevertheless to add some little history to that of our own Oreiades; but shall set myself on the most familiar of them first, as I partly hinted in taking for the frontispiece of this volume two unchecked shoots of our commonest heath, in their state of full lustre and decline. And now I must go out and see and think—and for the first time in my life—what becomes of all these fallen blossoms, and where my own mountain Cora hides herself in winter; and where her sweet body is laid in its death.

Think of it with me, for a moment before I go. That harvest of amethyst bells, over all Scottish and Irish and Cumberland hill and moorland; what substance is there in it, yearly gathered out of the mountain winds,—stayed there, as if the morning and evening clouds had been caught out of them and woven into flowers; 'Ropes of sea-sand'—but that is child's magic merely, compared to the weaving of the Heath out of the cloud. And once woven, how much of it is forever worn by the Earth? What weight of that transparent tissue, half crystal and half comb of honey, lies strewn every year dead under the snow?

I must go and look, and can write no more to-day; nor to-morrow neither. I must gather slowly what I see, and remember; and meantime leaving, to be dealt with afterwards, the difficult and quite separate question of the production of



PLATE VIII.—MYRTILLA REGINA.
Sketched for her gesture only. Isella, 1877.

wood, I will close this first volume of Proserpina with some necessary statements respecting the operations, serviceable to other creatures than themselves, in which the lives of the noblest plants are ended : honourable in this service equally, though evanescent, some,—in the passing of a breeze—or the dying of a day ;—and patient some, of storm and time, serene in fruitful sanctity, through all the uncounted ages which Man has polluted with his tears.

CHAPTER XIII.

THE SEED AND HUSK.

1. Not the least sorrowful, nor least absurd of the confusions brought on us by unscholarly botanists, blundering into foreign languages, when they do not know how to use their own, is that which has followed on their practice of calling the seed-vessels of flowers 'egg-vessels,'* in Latin ; thus involving total loss of the power of the good old English word 'husk,' and the good old French one, 'cosse.' For all the treasures of plants (see Chapter IV., § 17) may be best conceived, and described, generally, as consisting of 'seed' and 'husk,'—for the most part two or more seeds, in a husk composed of two or more parts, as pease in their shell, pips in an orange, or kernels in a walnut ; but whatever their number, or the method of their enclosure, let the student keep clear in his mind, for the base of all study of fructification, the broad distinction between the seed, as one thing, and the husk as another : the seed, essential to the continuance of the plant's race ; and the husk, adapted, primarily, to its guard and dissemination ; but secondarily, to quite other and far more important functions.

2. For on this distinction follows another practical one of great importance. A seed may serve, and many do mightily serve, for the food of man, when boiled, crushed, or otherwise

* More literally "persons to whom the care of eggs is entrusted."

industriously prepared by man himself, for his mere *sustenance*. But the *husk* of the seed is prepared in many cases for the delight of his eyes, and the pleasure of his palate, by Nature herself, and is then called a 'fruit.'

3. The varieties of structure both in seed and husk, and yet more, the manner in which the one is contained, and distributed by, the other, are infinite; and in some cases the husk is apparently wanting, or takes some unrecognizable form. But in far the plurality of instances the two parts of the plant's treasury are easily distinguishable, and must be separately studied, whatever their apparent closeness of relation, or, (as in all natural things,) the equivocation sometimes taking place between the one and the other. To me, the especially curious point in this matter is that, while I find the most elaborate accounts given by botanists of the stages of growth in each of these parts of the treasury, they never say of what use the guardian is to the guarded part, irrespective of its service to man. The mechanical action of the husk in containing and scattering the seeds, they indeed often notice and insist on; but they do not tell us of what, if any, nutritious or fostering use the rind is to a chestnut, or an orange's pulp to its pips, or a peach's juice to its stone.

4. Putting aside this deeper question for the moment, let us make sure we understand well, and define safely, the separate parts themselves. A seed consists essentially of a store, or sack, containing substance to nourish a germ of life, which is surrounded by such substance, and in the process of growth is first fed by it. The germ of life itself rises into two portions, and not more than two, in the seeds of two-leaved plants; but this symmetrical dualism must not be allowed to confuse the student's conception, of the *three* organically separate parts,—the tough skin of a bean, for instance; the softer contents of it which we boil to eat; and the small germ from which the root springs when it is sown. A bean is the best type of the whole structure. An almond out of its shell, a peach-kernel, and an apple-pip are also clear and perfect, though varied types.

5. The husk, or seed-vessel, is seen in perfect simplicity of

type in the pod of a bean, or the globe of a poppy. There are, I believe, flowers in which it is absent or imperfect ; and when it contains only one seed, it may be so small and closely united with the seed it contains, that both will be naturally thought of as one thing only. Thus, in a dandelion, the little brown grains, which may be blown away, each with its silken parachute, are every one of them a complete husk and seed together. But the majority of instances (and those of plants the most serviceable to man) in which the seed-vessel has entirely a separate structure and mechanical power, justify us in giving it the normal term 'husk,' as the most widely applicable and intelligible.

6. The change of green, hard, and tasteless vegetable substance into beautifully coloured, soft, and delicious substance, which produces what we call a fruit, is, in most cases, of the husk only ; in others, of the part of the stalk which immediately sustains the seed ; and in a very few instances, not properly a change, but a distinct formation, of fruity substance between the husk and seed. Normally, however, the husk, like the seed, consists always of three parts ; it has an outer skin, a central substance of peculiar nature, and an inner skin, which holds the seed. The main difficulty, in describing or thinking of the completely ripened product of any plant, is to discern clearly which is the inner skin of the husk, and which the outer skin of the seed. The peach is in this respect the best general type,—the woolly skin being the outer one of the husk ; the part we eat, the central substance of the husk ; and the hard shell of the stone, the inner skin of the husk. The bitter kernel within is the seed.

7. In this case, and in the plum and cherry, the two parts under present examination—husk and seed—separate naturally ; the fruity part, which is the body of the husk, adhering firmly to the shell, which is its inner coat. But in the walnut and almond, the two outer parts of the husk separate from the interior one, which becomes an apparently independent 'shell.' So that when first I approached this subject I divided the general structure of a treasury into *three* parts—husk, shell, and kernel ; and this division, when we once have mas-

tered the main one, will be often useful. But at first let the student keep steadily to his conception of the two constant parts, husk and seed, reserving the idea of shells and kernels for one group of plants only.

8. It will not be always without difficulty that he maintains the distinction, when the tree pretends to have changed it. Thus, in the chestnut, the inner coat of the husk becomes brown, adheres to the seed, and seems part of it; and we naturally call only the thick, green, prickly coat, the husk. But this is only one of the deceiving tricks of Nature, to compel our attention more closely. The real place of separation, to *her* mind, is between the mahogany-coloured shell and the nut itself, and that more or less silky and flossy coating within the brown shell is the true lining of the entire 'husk.' The paler brown skin, following the rugosities of the nut, is the true sack or skin of the seed. Similarly in the walnut and almond.

9. But, in the apple, two new tricks are played us. First, in the brown skin of the ripe pip, we might imagine we saw the part correspondent to the mahogany skin of the chestnut, and therefore the inner coat of the husk. But it is not so. The brown skin of the pips belongs to them properly, and is all their own. It is the true skin or sack of the seed. The inner coat of the husk is the smooth, white, scaly part of the core that holds them.

Then,—for trick number two. We should as naturally imagine the skin of the apple, which we peel off, to be correspondent to the skin of the peach; and therefore, to be the outer part of the husk. But not at all. The outer part of the husk in the apple is melted away into the fruity mass of it, and the red skin outside is the skin of its *stalk*, not of its seed-vessel at all!

10. I say 'of its stalk,'—that is to say, of the part of the stalk immediately sustaining the seed, commonly called the torus, and expanding into the calyx. In the apple, this torus incorporates itself with the husk completely; then refines its own external skin, and colours *that* variously and beautifully, like the true skin of the husk in the peach, while the withered leaves of the calyx remain in the 'eye' of the apple.

But in the 'hip' of the rose, the incorporation with the husk of the seed does not take place. The torus, or,—as in this flower from its peculiar form it is called,—the tube of the calyx, alone forms the frutescent part of the hip; and the complete seeds, husk and all, (the firm triangular husk enclosing an almond-shaped kernel,) are grouped closely in its interior cavity, while the calyx remains on the top in a large and scarcely withering star. In the nut, the calyx remains green and beautiful, forming what we call the husk of a filbert; and again we find Nature amusing herself by trying to make us think that this strict envelope, almost closing over the single seed, is the same thing to the nut that its green shell is to a walnut!

11. With still more capricious masquing, she varies and hides the structure of her 'berries.'

The strawberry is a hip turned inside-out, the frutescent receptacle changed into a scarlet ball, or cone, of crystalline and delicious coral, in the outside of which the separate seeds, husk and all, are imbedded. In the raspberry and blackberry, the interior mound remains sapless; and the rubied translucency of dulcet substance is formed round each separate seed, *upon* its husk; not a part of the husk, but now an entirely independent and added portion of the plant's bodily form.

12. What is thus done for each seed, on the *outside* of the receptacle, in the raspberry, is done for each seed, *inside* the calyx, in a pomegranate; which is a hip in which the seeds have become surrounded with a radiant juice, richer than claret wine; while the seed itself, within the generous jewel, is succulent also, and spoken of by Tournefort as a "*baie succulente*." The tube of the calyx, brown-russet like a large hip, externally, is yet otherwise divided, and separated wholly from the cinque-foiled, and cinque-celled rose, both in number of petal and division of treasures; the calyx has eight points, and nine cells.

13. Lastly, in the orange, the fount of fragrant juice is interposed between the seed and the husk. It is wholly independent of both; the Aurantine rind, with its white lining and divided compartments, is the true husk; the orange pips are

in English, 'Flour,'—both in the perfectly nourishing elements of it, and its easy and abundant multiplicability, becomes the primal treasure of human economy.

3. It has been the practice of botanists of all nations to consider the seeds of the grasses together with those of roses and pease, as if all could be described on the same principles, and with the same nomenclature of parts. But the grain of corn is a quite distinct thing from the seed of pease. In it, the husk and the seed envelope have become inextricably one. All the exocarps, endocarps, epicarps, mesocarps, shells, husks, sacks, and skins, are woven at once together into the brown bran; and inside of that, a new substance is collected for us, which is not what we boil in pease, or poach in eggs, or munch in nuts, or grind in coffee;—but a thing which, mixed with water and then baked, has given to all the nations of the world their prime word for food, in thought and prayer,—Bread; their prime conception of the man's and woman's labor in preparing it—("whoso putteth hand to the *plough*"—two women shall be grinding at the *mill*)—their prime notion of the means of cooking by fire—("which to-day is, and to-morrow is cast into the *oven*"), and their prime notion of culinary office—the "*chief baker*," cook, or pastry cook,—(compare Bedred-din Hassan in the Arabian Nights): and, finally, to modern civilization, the Saxon word 'lady,' with whatever it imports.

4. It has also been the practice of botanists to confuse all the ripened products of plants under the general term 'fruit.' But the essential and separate fruit-gift is of two substances, quite distinct from flour, namely, oil and wine, under the last term including for the moment all kinds of juice which will produce alcohol by fermentation. Of these, oil may be produced either in the kernels of nuts, as in almonds, or in the substance of berries, as in the olive, date, and coffee-berry. But the sweet juice which will become medicinal in wine, can only be developed in the husk, or in the receptacle.

5. The office of the Chief Butler, as opposed to that of the Chief Baker, and the office of the Good Samaritan, pouring in oil and wine, refer both to the total fruit-gift in both kinds: but in the study of plants, we must primarily separate our

notion of their gifts to men into the three elements, flour, oil, and wine; and have instantly and always intelligible names for them in Latin, French, and English.

And I think it best not to confuse our ideas of pure vegetable substance with the possible process of fermentation:—so that rather than 'wine,' for a constant specific term, I will take 'Nectar,'—this term more rightly including the juices of the peach, nectarine, and plum, as well as those of the grape, currant, and apple.

Our three separate substances will then be easily named in all three languages:

Farina.	Oleum.	Nectar.
Farine.	Huile.	Nectare.
Flour.	Oil.	Nectar.

There is this farther advantage in keeping the third common term, that it leaves us the words Succus, Jus, Juice, for other liquid products of plants, watery, milky, sugary, or resinous,—often indeed important to man, but often also without either agreeable flavor or nutritious power; and it is therefore to be observed with care that we may use the word 'juice,' of a liquid produced by any part of a plant, but 'nectar,' only of the juices produced in its fruit.

6. But the good and pleasure of fruit is not in the juice only;—in some kinds, and those not the least valuable, (as the date,) it is not in the juice at all. We still stand absolutely in want of a word to express the more or less firm *substance* of fruit, as distinguished from all other products of a plant. And with the usual ill-luck,—(I advisedly think of it as demoniacal misfortune)—of botanical science, no other name has been yet used for such substance than the entirely false and ugly one of 'Flesh,'—Fr., 'Chair,' with its still more painful derivation 'Charnu,' and in England the monstrous scientific term, 'Sarco-carp.'

But, under the housewifery of Proserpina, since we are to call the juice of fruit, Nectar, its substance will be as naturally and easily called Ambrosia; and I have no doubt that this,

with the other names defined in this chapter, will not only be found practically more convenient than the phrases in common use, but will more securely fix in the student's mind a true conception of the essential differences in substance, which, ultimately, depend wholly on their pleasantness to human perception, and offices for human good ; and not at all on any otherwise explicable structure or faculty. It is of no use to determine, by microscope or retort, that cinnamon is made of cells with so many walls, or grape-juice of molecules with so many sides ;—we are just as far as ever from understanding why these particular interstices should be aromatic, and these special parallelopipeds exhilarating, as we were in the savagely unscientific days when we could only see with our eyes, and smell with our noses. But to call each of these separate substances by a name rightly belonging to it through all the past variations of the language of educated man, will probably enable us often to discern powers in the thing itself, of affecting the human body and mind, which are indeed qualities infinitely more its *own*, than any which can possibly be extracted by the point of a knife, or brayed out with a mortar and pestle.

7. Thus, to take merely instance in the three main elements of which we have just determined the names,—flour, oil, and ambrosia ;—the differences in the kinds of pleasure which the tongue received from the powderiness of oat-cake, or a well-boiled potato—(in the days when oat-cake and potatoes were !)—from the glossily-softened crispness of a well-made salad, and from the cool and fragrant amber of an apricot, are indeed distinctions between the essential virtues of things which were made to be *tasted*, much more than to be eaten ; and in their various methods of ministry to, and temptation of, human appetites, have their part in the history, not of elements merely, but of souls ; and of the soul-virtues, which from the beginning of the world have bade the barrel of meal not waste, nor the cruse of oil fail ; and have planted, by waters of comfort, the fruits which are for the healing of nations.

8. And, again, therefore, I must repeat, with insistance,

the claim I have made for the limitation of language to the use made of it by educated men. The word 'carp' could never have multiplied itself into the absurdities of endo-carps and epi-carps, but in the mouths of men who scarcely ever read it in its original letters, and therefore never recognized it as meaning precisely the same thing as 'fructus,' which word, being a little more familiar with, they would have scarcely abused to the same extent; they would not have called a walnut shell an intra-fruct—or a grape skin an extra-fruct; but again, because, though they are accustomed to the English 'fructify,' 'frugivorous'—and 'usufruct,' they are unaccustomed to the Latin 'fruor,' and unconscious therefore that the derivative 'fructus' must always, in right use, mean an *enjoyed* thing, they generalize every mature vegetable product under the term; and we find Dr. Gray coolly telling us that there is no fruit so "likely to be mistaken for a seed," as a grain of corn! a grain, whether of corn, or any other grass, being precisely the vegetable structure to which frutescent change is forever forbidden! and to which the word *seed* is primarily and perfectly applicable!—the thing to be *sown*, not grafted.

9. But to mark this total incapability of frutescent change, and connect the form of the seed more definitely with its dusty treasure, it is better to reserve, when we are speaking with precision, the term 'grain' for the seeds of the grasses: the difficulty is greater in French than in English: because they have no monosyllabic word for the constantly granular 'seed'; but for us the terms are all simple, and already in right use, only not quite clearly enough understood; and there remains only one real difficulty now in our system of nomenclature, that having taken the word 'husk' for the seed-vessel, we are left without a general word for the true fringe of a filbert, or the chaff of a grass. I don't know whether the French 'frange' could be used by them in this sense, if we took it in English botany. But for the present, we can manage well enough without it, one general term, 'chaff,' serving for all the grasses, 'cup' for acorns, and 'fringe' for nuts.

10. But I call this a *real* difficulty, because I suppose, among

the myriads of plants of which I know nothing, there may be forms of the envelope of fruits or seeds which may, for comfort of speech, require some common generic name. One *unreal* difficulty, or shadow of difficulty, remains in our having no entirely comprehensive name for seed and seed-vessel together than that the botanists now use, 'fruit.' But practically, even now, people feel that they can't gather figs of thistles, and never speak of the fructification of a thistle, or of the fruit of a dandelion. And, re-assembling now, in one view, the words we have determined on, they will be found enough for all practical service, and in such service always accurate, and, usually, suggestive. I repeat them in brief order, with such farther explanation as they need.

11. All ripe products of the life of flowers consist essentially of the Seed and Husk,—these being, in certain cases, sustained, surrounded, or provided with means of motion, by other parts of the plant; or by developments of their own form which require in each case distinct names. Thus the white cushion of the dandelion to which its brown seeds are attached, and the personal parachutes which belong to each, must be separately described for that species of plants; it is the little brown thing they sustain and carry away on the wind, which must be examined as the essential product of the floret;—the 'seed and husk.'

12. Every seed has a husk, holding either that seed alone, or other seeds with it.

Every perfect seed consists of an embryo, and the substance which first nourishes that embryo; the whole enclosed in a sack or other sufficient envelope. Three essential parts altogether.

Every perfect husk, vulgarly pericarp, or 'round-fruit,'—(as periwig, 'round-wig,')—consists of a shell, (vulgarly endocarp,) rind, (vulgarly mesocarp,) and skin, (vulgarly epicarp); three essential parts altogether. But one or more of these parts may be effaced, or confused with another; and in the seeds of grasses they all concentrate themselves into bran.

13. When a husk consists of two or more parts, each of which has a separate shaft and volute, uniting in the pillar



PLATE IX.—*VIOLA CANINA*.

Fast Sketch, to show Grouping of Leaves.

PROSERPINA.

VOL. II.

CHAPTER I.

VIOLA.

1. ALTHOUGH I have not been able in the preceding volume to complete, in any wise as I desired, the account of the several parts and actions of plants in general, I will not delay any longer our entrance on the examination of particular kinds, though here and there I must interrupt such special study by recurring to general principles, or points of wider interest. But the scope of such larger inquiry will be best seen, and the use of it best felt, by entering now on specific study.

I begin with the Violet, because the arrangement of the group to which it belongs—Cytherides—is more arbitrary than that of the rest, and calls for some immediate explanation.

2. I fear that my readers may expect me to write something very pretty for them about violets: but my time for writing prettily is long past; and it requires some watching over myself, I find, to keep me even from writing querulously. For while, the older I grow, very thankfully I recognize more and more the number of pleasures granted to human eyes in this fair world, I recognize also an increasing sensitiveness in my temper to anything that interferes with them; and a grievous readiness to find fault—always of course submissively, but very articulately—with whatever Nature seems to me not to have managed to the best of her power;—as, for extreme instance, her late arrangements of frost this spring, destroying all the

and opening of its flower,—not at all, in any strain of modesty, hiding *itself*, though it may easily be, by grass or mossy stone, ‘half hidden,’—but, to the full, showing itself, and intending to be lovely and luminous, as fragrant, to the uttermost of its soft power.

Nor merely in its oblique setting on the stalk, but in the reversion of its two upper petals, the flower shows this purpose of being fully seen. (For a flower that *does* hide itself, take a lily of the valley, or the bell of a grape hyacinth, or a cyclamen.) But respecting this matter of petal-reversion, we must now farther state two or three general principles.

6. A perfect or pure flower, as a rose, oxalis, or campanula, is always composed of an unbroken whorl, or corolla, in the form of a disk, cup, bell, or, if it draw together again at the lips, a narrow-necked vase. This cup, bell, or vase, is divided into similar petals, (or segments, which are petals carefully joined,) varying in number from three to eight, and enclosed by a calyx whose sepals are symmetrical also.

An imperfect, or, as I am inclined rather to call it, an ‘injured’ flower, is one in which some of the petals have inferior office and position, and are either degraded, for the benefit of others, or expanded and honoured at the cost of others.

Of this process, the first and simplest condition is the reversal of the upper petals and elongation of the lower ones, in blossoms set on the side of a clustered stalk. When the change is simply and directly dependent on their position in the cluster, as in *Aurora Regina*,* modifying every bell just in proportion as it declines from the perfected central one, some of the loveliest groups of form are produced which can be seen in any inferior organism: but when the irregularity becomes fixed, and the flower is always to the same extent distorted, whatever its position in the cluster, the plant is to be rightly thought of as reduced to a lower rank in creation.

7. It is to be observed, also, that these inferior forms of flower have always the appearance of being produced by some kind of mischief—blight, bite, or ill-breeding; they never suggest the idea of improving themselves, now, into anything

* Vol. i., p. 162, note.

better ; one is only afraid of their tearing or puffing themselves into something worse. Nay, even the quite natural and simple conditions of inferior vegetable do not in the least suggest, to the unbitten or unblighted human intellect, the notion of development into anything other than their like : one does not expect a mushroom to translate itself into a pineapple, nor a betony to moralize itself into a lily, nor a snapdragon to soften himself into a lilac.

8. It is very possible, indeed, that the recent phrenzy for the investigation of digestive and reproductive operations in plants may by this time have furnished the microscopic malice of botanists with providentially disgusting reasons, or demoniacally nasty necessities, for every possible spur, spike, jag, sting, rent, blotch, flaw, freckle, filth, or venom, which can be detected in the construction, or distilled from the dissolution, of vegetable organism. But with these obscene processes and prurient apparitions the gentle and happy scholar of flowers has nothing whatever to do. I am amazed and saddened, more than I care to say, by finding how much that is abominable may be discovered by an ill-taught curiosity, in the purest things that earth is allowed to produce for us ;—perhaps if we were less reprobate in our own ways, the grass which is our type might conduct itself better, even though *it* has no hope but of being cast into the oven ; in the meantime, healthy human eyes and thoughts are to be set on the lovely laws of its growth and habitation, and not on the mean mysteries of its birth.

9. I relieve, therefore, our presently inquiring souls from any farther care as to the reason for a violet's spur,—or for the extremely ugly arrangements of its stamens and style, invisible unless by vexatious and vicious peeping. You are to think of a violet only in its green leaves, and purple or golden petals ;—you are to know the varieties of form in both, proper to common species ; and in what kind of places they all most fondly live, and most deeply glow.

“And the recreation of the minde which is taken heereby cannot be but verie good and honest, for they admonish and stir up a man to that which is comely and honest. For

flowers, through their beautie, varietie of colour, and exquisite forme, do bring to a liberall and gentle manly minde the remembrance of honestie, comeliness, and all kinds of vertues. For it would be an unseemely and filthie thing, as a certain wise man saith, for him that doth looke upon and handle faire and beautiful things, and who frequenteth and is conversant in faire and beautiful places, to have his mind not faire, but filthie and deformed."

10. Thus Gerarde, in the close of his introductory notice of the violet,—speaking of things, (honesty, comeliness, and the like,) scarcely now recognized as desirable in the realm of England; but having previously observed that violets are useful for the making of garlands for the head, and posies to smell to;—in which last function I observe they are still pleasing to the British public: and I found the children here, only the other day, munching a confection of candied violet leaves. What pleasure the flower can still give us, uncandied, and unbound, but in its own place and life, I will try to trace through some of its constant laws.

11. And first, let us be clear that the native colour of the violet is violet; and that the white and yellow kinds, though pretty in their place and way, are not to be thought of in generally meditating the flower's quality or power. A white violet is to black ones what a black man is to white ones; and the yellow varieties are, I believe, properly pansies, and belong also to wild districts for the most part; but the true violet, which I have just now called 'black,' with Gerarde, "the blacke or purple violet, hath a great prerogative above others," and all the nobler species of the pansy itself are of full purple, inclining, however, in the ordinary wild violet to blue. In the 'Laws of Fésole,' chap. vii., §§ 20, 21, I have made this dark pansy the representative of purple pure; the *viola odorata*, of the link between that full purple and blue; and the heath-blossom of the link between that full purple and red. The reader will do well, as much as may be possible to him, to associate his study of botany, as indeed all other studies of visible things, with that of painting: but he must remember that he cannot know what violet colour

of the wise classifying people, who say that violets and pansies are the same thing—and that neither of them are of much interest! As, for instance, Dr. Lindley in his ‘Ladies’ Botany.’

“Violets—sweet Violets, and Pansies, or Heartsease, represent a small family, with the structure of which you should be familiar; more, however, for the sake of its singularity than for its extent or importance, for the family is a very small one, and there are but few species belonging to it in which much interest is taken. As the parts of the Heartsease are larger than those of the violet, let us select the former in preference for the subject of our study.” Whereupon we plunge instantly into the usual account of things with horns and tails. “The stamens are five in number—two of them, which are in front of the others, are hidden within the horn of the front petal,” etc., etc., etc. (Note in passing, by the ‘*horn of the front*’ petal he means the ‘*spur of the bottom*’ one, which indeed does stand in front of the rest,—but if therefore it is to be called the *front* petal—which is the back one?) You may find in the next paragraph description of a “singular conformation,” and the interesting conclusion that “no one has yet discovered for what purpose this singular conformation was provided.” But you will not, in the entire article, find the least attempt to tell you the difference between a violet and a pansy!—except in one statement—and *that* false! “The sweet violet will have no rival among flowers, if we merely seek for delicate fragrance; but her sister, the heartsease, who is destitute of all sweetness, far surpasses her in rich dresses and *gaudy*!!! colours.” The heartsease is not without sweetness. There are sweet pansies scented, and dog pansies unscented—as there are sweet violets scented, and dog violets unscented. What is the real difference?

14. I turn to another scientific gentleman—*more* scientific in form indeed, Mr. Grindon,—and find, for another interesting phenomenon in the violet, that it sometimes produces flowers without any petals! and in the pansy, that “the flowers turn towards the sun, and when many are open at once, present a droll appearance, looking like a number of faces all

on the 'qui vive.'" But nothing of the difference between them, except something about 'stipules,' of which "it is important to observe that the leaves should be taken from the middle of the stem—those above and below being variable."

I observe, however, that Mr. Grindon *has* arranged his violets under the letter A, and his pansies under the letter B, and that something may be really made out of him, with an hour or two's work. I am content, however, at present, with his simplifying assurance that of violet and pansy together, "six species grow wild in Britain—or, as some believe, only four—while the analysts run the number up to fifteen."

15. Next I try Loudon's *Cyclopædia*, which, through all its 700 pages, is equally silent on the business; and next, Mr. Baxter's 'British Flowering Plants,' in the index of which I find neither Pansy nor Heartsease, and only the 'Calathian' Violet, (where on earth is *Calathia*?) which proves, on turning it up, to be a Gentian.

16. At last, I take my *Figuier*, (but what should I do if I only knew English?) and find this much of clue to the matter:—

"Qu'est ce que c'est que la Pensée? Cette jolie plante appartient aussi au genre *Viola*, mais à un section de ce genre. En effet, dans les Pensées, les pétales supérieurs et latéraux sont dirigés en haut, l'inférieur seul est dirigé en bas: et de plus, le stigmat est urcéole, globuleux."

And farther, this general description of the whole violet tribe, which I translate, that we may have its full value:—

"The violet is a plant without a stem (*tige*),—(see vol. i., p. 108,)—whose height does not surpass one or two decimetres. Its leaves, radical, or carried on stolons, (vol. i., p. 111,) are sharp, or oval, crenulate, or heart-shape. Its stipules are oval-acuminate, or lanceolate. Its flowers, of sweet scent, of a dark violet or a reddish blue, are carried each on a slender peduncle, which bends down at the summit. Such is, for the botanist, the Violet, of which the poets would give assuredly another description."

17. Perhaps; or even the painters! or even an ordinary

unbotanical human creature ! I must set about my business, at any rate, in my own way, now, as I best can, looking first at things themselves, and then putting this and that together, out of these botanical persons, which they can't put together out of themselves. And first, I go down into my kitchen garden, where the path to the lake has a border of pansies on both sides all the way down, with clusters of narcissus behind them. And pulling up a handful of pansies by the roots, I find them "without stems," indeed, if a stem means a wooden thing ; but I should say, for a low-growing flower, quite lankily and disagreeably stalky ! And, thinking over what I remember about wild pansies, I find an impression on my mind of their being rather more stalky, always, than is quite graceful ; and, for all their fine flowers, having rather a weedy and littery look, and getting into places where they have no business. See, again, vol. i., chap. vi., § 5.

18. And now, going up into my flower and fruit garden, I find (June 2nd, 1881, half-past six, morning,) among the wild saxifrages, which are allowed to grow wherever they like, and the rock strawberries, and Francescas, which are coaxed to grow wherever there is a bit of rough ground for them, a bunch or two of pale pansies, or violets, I don't know well which, by the flower ; but the entire company of them has a ragged, jagged, unpurpose-like look ; extremely,—I should say,—demoralizing to all the little plants in their neighbourhood : and on gathering a flower, I find it is a nasty big thing, all of a feeble blue, and with two things like horns, or thorns, sticking out where its ears would be, if the pansy's frequently monkey face were underneath them. Which I find to be two of the leaves of its calyx 'out of place,' and, at all events, for their part, therefore, weedy, and insolent.

19. I perceive, farther, that this disorderly flower is lifted on a lanky, awkward, springless, and yet stiff flower-stalk ; which is not round, as a flower-stalk ought to be, (vol. i., p. 235,) but obstinately square, and fluted, with projecting edges, like a pillar run thin out of an iron-foundry for a cheap railway station. I perceive also that it has set on it, just before turning down to carry the flower, two little jaggy and in-

definable leaves,—their colour a little more violet than the blossom.

These, and such undeveloping leaves, wherever they occur, are called 'bracts' by botanists, a good word, from the Latin 'bractea,' meaning a piece of metal plate, so thin as to crackle. They seem always a little stiff, like bad parchment,—born to come to nothing—a sort of infinitesimal fairy-lawyer's deed. They ought to have been in my index at p. 237, under the head of leaves, and are frequent in flower structure,—never, as far as one can see, of the smallest use. They are constant, however, in the flower-stalk of the whole violet tribe.

20. I perceive, farther, that this lanky flower-stalk, bending a little in a crabbed, broken way, like an obstinate person tired, pushes itself up out of a still more stubborn, nondescript, hollow angular, dogs-eared gaspipe of a stalk, with a section something like this,



but no bigger than



with

a quantity of ill-made and ill-hemmed leaves on it, of no describable leaf-cloth or texture,—not cressic, (though the thing does altogether look a good deal like a quite uneatable old watercress); not salvian, for there's no look of warmth or comfort in them; not cauline, for there's no juice in them; not dryad, for there's no strength in them, nor apparent use: they seem only there, as far as I can make out, to spoil the flower, and take the good out of my garden bed. Nobody in the world could draw them, they are so mixed up together, and crumpled and hacked about, as if some ill-natured child had snipped them with blunt scissors, and an ill-natured cow chewed them a little afterwards and left them, proving far too tough or too bitter.

21. Having now sufficiently observed, it seems to me, this incongruous plant, I proceed to ask myself, over it, M. Figuiér's question, 'Qu'est-ce c'est qu'un Pensée?' Is this a violet—or a pansy—or a bad imitation of both?

Whereupon I try if it has any scent: and to my much surprise, find it has a full and soft one—which I suppose is what my gardener keeps it for! According to Dr. Lindley, then,

it must be a violet! But according to M. Figuiet,—let me see, do its middle petals bend up, or down?

I think I'll go and ask the gardener what *he* calls it.

22. My gardener, on appeal to him, tells me it is the 'Viola Cornuta,' but that he does not know himself if it is violet or pansy. I take my Loudon again, and find there were fifty-three species of violets, known in his days, of which, as it chances, Cornuta is exactly the last.

'Horned violet': I said the green things were *like* horns!—but what is one to say of, or to do to, scientific people, who first call the spur of the violet's petal, horn, and then its calyx points, horns, and never define a 'horn' all the while!

Viola Cornuta, however, let it be; for the name does mean something, and is not false Latin. But whether violet or pansy, I must look farther to find out.

23. I take the Flora Danica, in which I at least am sure of finding whatever is done at all, done as well as honesty and care can; and look what species of violets it gives.

Nine, in the first ten volumes of it; four in their modern sequel (that I know of,—I have had no time to examine the last issues). Namely, in alphabetical order, with their present Latin, or tentative Latin, names; and in plain English, the senses intended by the hapless scientific people, in such their tentative Latin:—

(1)	Viola Arvensis	Field (Violet)	No. 1748
(2)	" Biflora.	Two-flowered	46
(3)	" Canina.	Dog	1453
(3B)	" Canina. Var. Multicaulis (many-stemmed),		
	a very singular sort of violet—if it were		
	so! Its real difference from our dog-		
	violet is in being pale blue, and having a		
	golden centre		2646
(4)	" Hirta.	Hairy	618
(5)	" Mirabilis.	Marvellous	1045
(6)	" Montana.	Mountain	1329
(7)	" Odorata.	Odorous	309
(8)	" Palustris.	Marshy	83

(9)	Viola Tricolor.	Three-coloured	623
(9B)	" Tricolor.	Var. Arenaria, Sandy Three-coloured	2647
(10)	" Elatior.	Taller	68
(11)	" Epipsila.	(Heaven knows what: it is Greek, not Latin, and looks as if it meant something between a bishop and a short letter e),	2405

I next run down this list, noting what names we can keep, and what we can't; and what aren't worth keeping, if we could: passing over the varieties, however, for the present, wholly.

- (1) *Arvensis*. Field-violet. Good.
- (2) *Biflora*. A good epithet, but in false Latin. It is to be our *Viola aurea*, golden pansy.
- (3) *Canina*. Dog. Not pretty, but intelligible, and by common use now classical. Must stay.
- (4) *Hirta*. Late Latin slang for *hirsuta*, and always used of nasty places or nasty people; it shall not stay. The species shall be our *Viola Seclusa*,—Monk's violet—meaning the kind of monk who leads a rough life like Elijah's, or the Baptist's, or Esau's—in another kind. This violet is one of the loveliest that grows.
- (5) *Mirabilis*. Stays so; marvellous enough, truly: not more so than all violets; but I am very glad to hear of scientific people capable of admiring anything.
- (6) *Montana*. Stays so.
- (7) *Odorata*. Not distinctive;—nearly classical, however. It is to be our *Viola Regina*, else I should not have altered it.
- (8) *Palustris*. Stays so.
- (9) *Tricolor*. True, but intolerable. The flower is the queen of the true pansies: to be our *Viola Psyche*.
- (10) *Elatior*. Only a variety of our already accepted *Cornuta*.

- (11) The last is, I believe, also only a variety of *Palustris*. Its leaves, I am informed in the text, are either "pubescent-reticulate-venose-subreniform," or "lato-cordate-repando-crenate;" and its stipules are "ovate-acuminate-fimbrio-denticulate." I do not wish to pursue the inquiry farther.

24. These ten species will include, noting here and there a local variety, all the forms which are familiar to us in Northern Europe, except only two;—these, as it singularly chances, being the *Viola Alpium*, noblest of all the wild pansies in the world, so far as I have seen or heard of them,—of which, consequently, I find no picture, nor notice, in any botanical work whatsoever; and the other, the rock-violet of our own Yorkshire hills.

We have therefore, ourselves, finally then, twelve following species to study. I give them now all in their accepted names and proper order,—the reasons for occasional difference between the Latin and English name will be presently given.

(1)	<i>Viola Regina.</i>	Queen violet.
(2)	" <i>Psyche.</i>	Ophelia's pansy.
(3)	" <i>Alpium.</i>	Freneli's pansy.
(4)	" <i>Aurea.</i>	Golden violet.
(5)	" <i>Montana.</i>	Mountain violet.
(6)	" <i>Mirabilis.</i>	Marvellous violet.
(7)	" <i>Arvensis.</i>	Field violet.
(8)	" <i>Palustris.</i>	Marsh violet.
(9)	" <i>Seclusa.</i>	Monk's violet.
(10)	" <i>Canina.</i>	Dog violet.
(11)	" <i>Cornuta.</i>	Cow violet.
(12)	" <i>Rupestris.</i>	Crag violet.

25. We will try, presently, what is to be found out of useful, or pretty, concerning all these twelve violets; but must first find out how we are to know which are violets indeed, and which, pansies.

Yesterday, after finishing my list, I went out again to examine *Viola Cornuta* a little closer, and pulled up a full grip of it by the roots, and put it in water in a wash-hand basin, which it filled like a truss of green hay.

Pulling out two or three separate plants, I find each to consist mainly of a jointed stalk of a kind I have not yet described,—roughly, some two feet long altogether; (accurately, one 1 ft. $10\frac{1}{2}$ in.; another, 1 ft. 10 in.; another, 1 ft. 9 in.—but all these measures taken without straightening, and therefore about an inch short of the truth), and divided into seven or eight lengths by clumsy joints where the mangled leafage is knotted on it; but broken a little out of the way at each joint, like a rheumatic elbow that won't come straight, or bend farther; and—which is the most curious point of all in it—it is thickest in the middle, like a viper, and gets quite thin to the root and thin towards the flower; also the lengths between the joints are longest in the middle: here I give them in inches, from the root upwards, in a stalk taken at random.

1st (nearest root)	.	.	.	.	.	$0\frac{3}{4}$
2nd	.	.	.	.	.	$0\frac{3}{4}$
3rd	.	.	.	.	.	$1\frac{1}{2}$
4th	.	.	.	.	.	$1\frac{3}{4}$
5th	.	.	.	.	.	3
6th	.	.	.	.	.	4
7th	.	.	.	.	.	$3\frac{1}{4}$
8th	.	.	.	.	.	3
9th	.	.	.	.	.	$2\frac{1}{4}$
10th	.	.	.	.	.	$1\frac{1}{2}$
						<hr/>
						1 ft. $9\frac{3}{4}$ in.

But the thickness of the joints and length of terminal flower stalk bring the total to two feet and about an inch over. I dare not pull it straight, or should break it, but it overlaps my two-foot rule considerably, and there are two inches besides of root, which are merely underground stem, very thin and wretched, as the rest of it is merely root above ground,

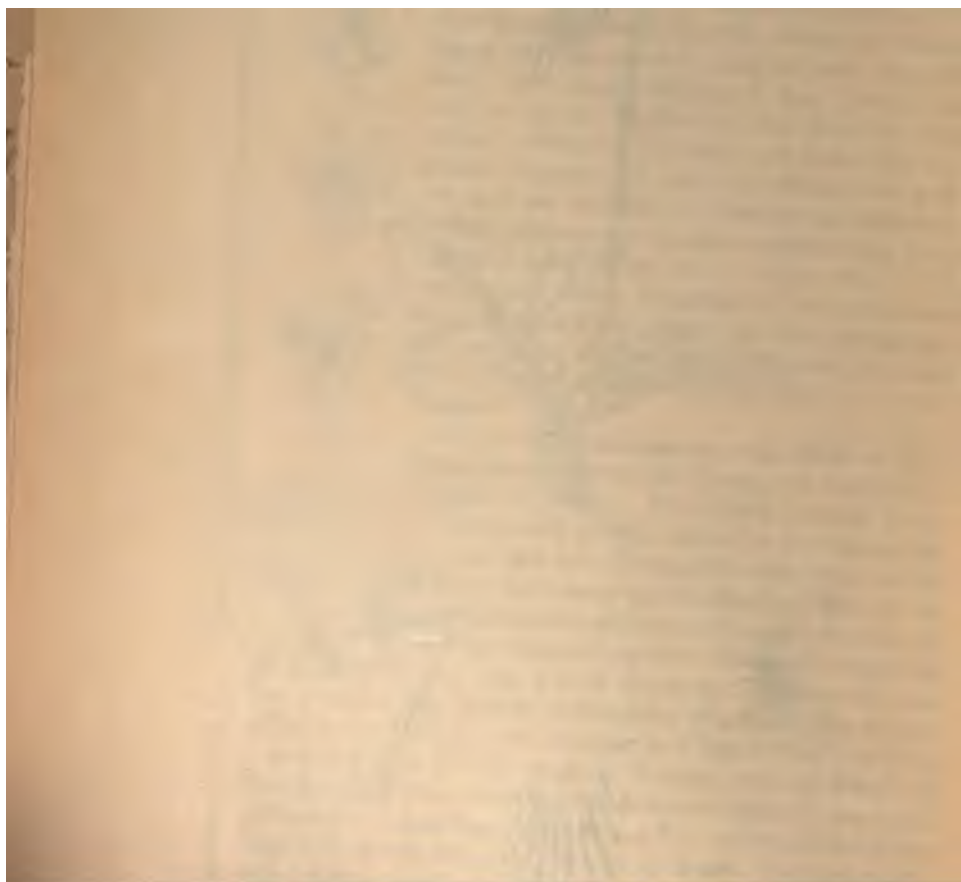
very thick and bloated. (I begin actually to be a little awed at it, as I should be by a green snake—only the snake would be prettier.) The flowers also, I perceive, have not their two horns regularly set *in*, but the five spiky calyx-ends stick out between the petals—sometimes three, sometimes four, it may be all five up and down—and produce variously fanged or forked effects, feebly ophidian or diabolic. On the whole, a plant entirely mismanaging itself,—reprehensible and awkward, with taints of worse than awkwardness; and clearly, no true ‘species,’ but only a link.* And it really is, as you will find presently, a link in two directions; it is half violet, half pansy, a ‘cur’ among the Dogs, and a thoughtless thing among the thoughtful. And being so, it is also a link between the entire violet tribe and the Runners—pease, strawberries, and the like, whose glory is in their speed; but a violet has no business whatever to run anywhere, being appointed to stay where it was born, in extremely contented (if not secluded) places. “Half-hidden from the eye?”—no; but desiring attention, or extension, or corpulence, or connection with anybody else’s family, still less.

26. And if, at the time you read this, you can run out and gather a *true* violet, and its leaf, you will find that the flower grows from the very ground, out of a cluster of heart-shaped leaves, becoming here a little rounder, there a little sharper, but on the whole heart-shaped, and that is the proper and essential form of the violet leaf. You will find also that the flower has five petals; and being held down by the bent stalk, two of them bend back and up, as if resisting it; two expand at the sides; and one, the principal, grows downwards, with its attached spur behind. So that the front view of the flower must be *some* modification of this typical arrangement, Fig. M, (for middle form). Now the statement above quoted from Figuier, § 16, means, if he had been able to express himself, that the two lateral petals in the violet are directed downwards, Fig. 11. A, and in the pansy upwards, Fig. 11. c. And that, in the main, is true, and to be fixed well and clearly in your mind. But in the real orders, one

* See ‘Deucalion,’ vol. ii., chap. i., p. 13, § 18.



PLATE X.—*VIOLA CANINA*. STRUCTURAL DETAILS



and if I can find their special name, it may perhaps be substituted with advantage for 'stipule'; but I have not witted enough by me just now to invent a term.

29. Whatever we call them, the things themselves are, throughout all the species of violets, developed in the running and weedy varieties, and much subdued in the beautiful ones; and generally the pansies have them large, with spear-shaped central leaves; and the violets small, with heart-shaped leaves, for more effective decoration of the ground. I now note the characters of each species in their above given order.

30. I. VIOLA REGINA. Queen Violet. Sweet Violet. 'Viola Odorata,' L., Flora Danica, and Sowerby. The latter draws it with golden centre and white base of lower petal; the Flora Danica, all purple. It is sometimes altogether white. It is seen most perfectly for setting off its colour, in group with primrose,—and most luxuriantly, so far as I know, in hollows of the Savoy limestones, associated with the pervenche, which embroiders and illumines them all over. I believe it is the earliest of its race, sometimes called 'Martia,' March violet. In Greece and South Italy even a flower of the winter.

"The Spring is come, the violet's *gone*,
The first-born child of the early sun.
With us, she is but a winter's flower;
The snow on the hills cannot blast her bower,
And she lifts up her dewy eye of blue
To the youngest sky of the selfsame hue.
And when the Spring comes, with her host
Of flowers, that flower beloved the most
Shrinks from the crowd that may confuse
Her heavenly odour, and virgin hues.
Pluck the others, but still remember
Their herald out of dim December,—
The morning star of all the flowers,
The pledge of daylight's lengthened hours,
Nor, midst the roses, e'er forget
The virgin, virgin violet." *

* A careless bit of Byron's, (the last song but one in the 'Deformed Transformed'); but Byron's most careless work is better, by its innate

31. It is the queen, not only of the violet tribe, but of all low-growing flowers, in sweetness of scent—variously applicable and serviceable in domestic economy :—the scent of the lily of the valley seems less capable of preservation or use.

But, respecting these perpetual beneficences and benignities of the sacred, as opposed to the malignant, herbs, whose poisonous power is for the most part restrained in them, during their life, to their juices or dust, and not allowed sensibly to pollute the air, I should like the scholar to re-read pp. 240, 241 of vol. i., and then to consider with himself what a grotesquely warped and gnarled thing the modern scientific mind is, which fiercely busies itself in venomous chemistries that blast every leaf from the forests ten miles round ; and yet cannot tell us, nor even think of telling us, nor does even one of its pupils think of asking it all the while, how a violet throws off her perfume !—far less, whether it might not be more wholesome to ‘treat’ the air which men are to breathe in masses, by administration of vale-lilies and violets, instead of charcoal and sulphur !

The closing sentence of the first volume just now referred to—p. 243—should also be re-read ; it was the sum of a chapter I had in hand at that time on the Substances and Essences of Plants—which never got finished ;—and in trying to put it into small space, it has become obscure : the terms “logically inexplicable” meaning that no words or process of comparison will define scents, nor do any traceable modes of sequence or relation connect them ; each is an independent power, and gives a separate impression to the senses. Above all, there is no logic of pleasure, nor any assignable reason for the difference, between loathsome and delightful scent, which makes the fungus foul and the vervain sacred : but one practical conclusion I (who am in all final ways the most prosaic and practical of human creatures) do very solemnly beg my readers to meditate ; namely, that although not recognized by

energy, than other people’s most laboured. I suppress, in some doubts about my ‘digamma,’ notes on the Greek violet and the Ion of Euripides ;—which the reader will perhaps be good enough to fancy a serious loss to him, and supply for himself.

actual offensiveness of scent, there is no space of neglected land which is not in some way modifying the atmosphere of *all the world*,—it may be, beneficently, as heath and pine,—it may be, malignantly, as Pontine marsh or Brazilian jungle ; but, in one way or another, for good and evil constantly, by day and night, the various powers of life and death in the plants of the desert are poured into the air, as vials of continual angels : and that no words, no thoughts can measure, nor imagination follow, the possible change for good which energetic and tender care of the wild herbs of the field and trees of the wood might bring, in time, to the bodily pleasure and mental power of Man.

32. II. VIOLA PSYCHE. Ophelia's Pansy.

The wild heart's-ease of Europe ; its proper colour an exquisitely clear purple in the upper petals, gradated into deep blue in the lower ones ; the centre, gold. Not larger than a violet, but perfectly formed, and firmly set in all its petals. Able to live in the driest ground ; beautiful in the coast sand-hills of Cumberland, following the wild geranium and burnet rose : and distinguished thus by its power of life, in waste and dry places, from the violet, which needs kindly earth and shelter.

Quite one of the most lovely things that Heaven has made, and only degraded and distorted by any human interference ; the swollen varieties of it produced by cultivation being all gross in outline and coarse in colour by comparison.

It is badly drawn even in the 'Flora Danica,' No. 623, considered there apparently as a species escaped from gardens ; the description of it being as follows :—

"*Viola tricolor hortensis repens, flore purpureo et cœruleo, C. B. P., 199.*" (I don't know what C. B. P. means.) "*Pas-sim, juxta villas.*"

"*Viola tricolor, caule triquetro diffuso, foliis oblongis incisis, stipulis pinnatifidis,*" Linn. *Systema Naturæ*, 185.

33. "Near the country farms"—does the Danish botanist mean?—the more luxuriant weedy character probably acquired by it only in such neighbourhood ; and, I suppose, various confusion and degeneration possible to it beyond other

plants when once it leaves its wild home. It is given by Sibthorpe from the Trojan Olympus, with an exquisitely delicate leaf; the flower described as "triste et pallide violaceus," but coloured in his plate full purple; and as he does not say whether he went up Olympus to gather it himself, or only saw it brought down by the assistant whose lovely drawings are yet at Oxford, I take leave to doubt his epithets. That this should be the only Violet described in a 'Flora Græca' extending to ten folio volumes, is a fact in modern scientific history which I must leave the Professor of Botany and the Dean of Christ Church to explain.

34. The English varieties seem often to be yellow in the lower petals, (see Sowerby's plate, 1287 of the old edition); crossed, I imagine, with *Viola Aurea*, (but see under *Viola Rupestris*, No. 12); the names, also, varying between tricolor and bicolor—with no note anywhere of the three colours, or two colours, intended!

The old English names are many.—'Love in idleness,'—making *Lysander*, as *Titania*, much wandering in mind, and for a time mere 'Kits run the street' (or run the wood?)—"Call me to you" (Gerarde, ch. 299, Sowerby, No. 178), with 'Herb Trinity,' from its three colours, blue, purple, and gold, variously blended in different countries? 'Three faces under a hood' describes the English variety only. Said to be the ancestress of all the florists' pansies, but this I much doubt, the next following species being far nearer the forms most chiefly sought for.

35. III. *VIOLA ALPINA*. 'Freneli's Pansy'—my own name for it, from Gotthelf's Freneli, in 'Ulric the Farmer'; the entirely pure and noble type of the Bernese maid, wife, and mother.

The pansy of the Wengern Alp in specialty, and of the higher, but still rich, Alpine pastures. Full dark-purple; at least an inch across the expanded petals; I believe, the 'Mater Violarum' of Gerarde; and true black violet of Virgil, remaining in Italian '*Viola Mammola*' (Gerarde, ch. 298).

36. IV. *VIOLA AUREA*. Golden Violet. Biflora usually; but its brilliant yellow is a much more definite characteristic; and

needs insisting on, because there is a 'Viola lutea' which is not yellow at all; named so by the garden-florists. My Viola aurea is the Rock-violet of the Alps; one of the bravest, brightest, and dearest of little flowers. The following notes upon it, with its summer companions, a little corrected from my diary of 1877, will enough characterize it.

"June 7th.—The cultivated meadows now grow only dandelions—in frightful quantity too; but, for wild ones, primula, bell gentian, golden pansy, and anemone,—Primula farinosa in mass, the pansy pointing and vivifying in a petulant sweet way, and the bell gentian here and there deepening all,—as if indeed the sound of a deep bell among lighter music.

"Counted in order, I find the effectively constant flowers are eight; * namely,

"1. The golden anemone, with richly cut large leaf; primrose colour, and in masses like primrose, studded through them with bell gentian, and dark purple orchis.

"2. The dark purple orchis, with bell gentian in equal quantity, say six of each in square yard, broken by sparklings of the white orchis and the white grass flower; the richest piece of colour I ever saw, touched with gold by the geum.

"3 and 4. These will be white orchis and the grass flower.†

"5. Geum—everywhere, in deep, but pure, gold, like pieces of Greek mosaic.

"6. Soldanella, in the lower meadows, delicate, but not here in masses.

"7. Primula Alpina, divine in the rock clefts, and on the ledges changing the grey to purple,—set in the dripping caves with

"8. Viola (pertinax—pert); I want a Latin word for various studies—failures all—to express its saucy little stuck-up way,

* Nine; I see that I missed count of P. farinosa, the most abundant of all.

† "A feeble little quatrefoil—growing one on the stem, like a Parnassia, and looking like a Parnassia that had dropped a leaf. I think it drops one of its own four, mostly, and lives as three-fourths of itself, for most of its time. Stamens pale gold. Root-leaves, three or four. "like; growing among the moist moss chiefly."

and exquisitely trim peltate leaf. I never saw such a lovely perspective line as the pure front leaf profile. Impossible also to get the least of the spirit of its lovely dark brown fibre markings. Intensely golden these dark fibres, just browning the petal a little between them."

And again in the defile of Gondo, I find "*Viola (saxatilis?)* name yet wanted ;—in the most delicate studding of its round leaves, like a small fern more than violet, and bright sparkle of small flowers in the dark dripping hollows. Assuredly delights in shade and distilling moisture of rocks."

I found afterwards a much larger yellow pansy on the Yorkshire high limestones ; with vigorously black crowfoot marking on the lateral petals.

37. *V. VIOLA MONTANA*. Mountain Violet.

Flora Danica, 1329. Linnæus, No. 13, "*Caulibus erectis, foliis cordato-lanceolatis, floribus serioribus apetalis,*" i.e., on erect stems, with leaves long heart-shape, and its later flowers without petals—not a word said of its earlier flowers which have got those unimportant appendages ! In the plate of the *Flora* it is a very perfect transitional form between violet and pansy, with beautifully firm and well-curved leaves, but the colour of blossom very pale. "In subalpinis Norvegiæ passim," all that we are told of it, means I suppose, in the lower Alpine pastures of Norway ; in the *Flora Suecica*, p. 306, habitat in Lapponica, juxta Alpes.

38. *VI. VIOLA MIRABILIS*. *Flora Danica*, 1045. A small and exquisitely formed flower in the balanced cinquefoil intermediate between violet and pansy, but with large and superbly curved and pointed leaves. It is a mountain violet, but belonging rather to the mountain woods than meadows. "In sylvaticis in Toten, Norvegiæ."

Loudon, 3056, "Broad-leaved : Germany."

Linnæus, *Flora Suecica*, 789, says that the flowers of it which have perfect corolla and full scent often bear no seed, but that the later 'cauline' blossoms, without petals, are fertile "Caulini vero apetalii fertiles sunt, et seriores. Habitat passim Upsaliæ."

I find this, and a plurality of other species, indicated by

Linnaeus as having triangular stalks, "caule triquetro," meaning, I suppose, the kind sketched in Figure 1 above.

39. VII. VIOLA ARVENSIS. Field Violet. Flora Danica, 1748. A coarse running weed; nearly like Viola Cornuta, but feebly lilac and yellow in colour. In dry fields, and with corn.

Flora Suecica, 791; under titles of Viola 'tricolor' and 'bicolor arvensis,' and Herba Trinitatis. Habitat ubique in *sterilibus arvis*: "Planta vix datur in qua evidentius perspicitur generationis opus, quam in hujus cavo apertoque stigmatē."

It is quite undeterminable, among present botanical instructors, how far this plant is only a rampant and over-indulged condition of the true pansy (Viola Psyche); but my own scholars are to remember that the true pansy is full purple and blue with golden centre; and that the disorderly field varieties of it, if indeed not scientifically distinguishable, are entirely separate from the wild flower by their scattered form and faded or altered colour. I follow the Flora Danica in giving them as a distinct species.

40. VIII. VIOLA PALUSTRIS. Marsh Violet. Flora Danica, 83. As there drawn, the most finished and delicate in form of all the violet tribe; warm white, streaked with red; and as pure in outline as an oxalis, both in flower and leaf; it is like a violet imitating oxalis and anagallis.

In the Flora Suecica, the petal-markings are said to be black; in 'Viola lactea' a connected species, (Sowerby, 45,) purple. Sowerby's plate of it under the name 'palustris' is pale purple veined with darker; and the spur is said to be 'honey-bearing,' which is the first mention I find of honey in the violet. The habitat given, sandy and turfy heaths. It is said to grow plentifully near Croydon.

Probably, therefore, a violet belonging to the chalk, on which nearly all herbs that grow wild—from the grass to the bluebell—are singularly sweet and pure. I hope some of my botanical scholars will take up this question of the effect of different rocks on vegetation, not so much in bearing different species of plants, as different characters of each species.*

* The great work of Lecoq, 'Geographie Botanique,' is of priceless value; but treats all on too vast a scale for our purposes.

41. IX. *VIOLA SECLUSA*. Monk's Violet. "Hirta," *Flora Danica*, 618, "In fruticetis raro." A true wood violet, full but dim in purple. Sowerby, 894, makes it paler. The leaves very pure and severe in the Danish one;—longer in the English. "Clothed on both sides with short, dense, hoary hairs."

Also belongs to chalk or limestone only (Sowerby).

X. *VIOLA CANINA*. Dog Violet. I have taken it for analysis in my two plates, because its grace of form is too much despised, and we owe much more of the beauty of spring to it, in English mountain ground, than to the *Regina*.

XI. *VIOLA CORNUTA*. Cow Violet. Enough described already.

XII. *VIOLA RUPESTRIS*. Crag Violet. On the high limestone moors of Yorkshire, perhaps only an English form of *Viola Aurea*, but so much larger, and so different in habit—growing on dry breezy downs, instead of in dripping caves—that I allow it, for the present, separate name and number.*

42. 'For the present,' I say all this work in 'Proserpina' being merely tentative, much to be modified by future students, and therefore quite different from that of 'Deucalion,' which is authoritative as far as it reaches, and will stand out like a quartz dyke, as the sandy speculations of modern gossiping geologists get washed away.

But in the meantime, I must again solemnly warn my girl-readers against all study of floral genesis and digestion. How far flowers invite, or require, flies to interfere in their family affairs—which of them are carnivorous—and what forms of pestilence or infection are most favourable to some vegetable and animal growths,—let them leave the people to settle who like, as Toinette says of the Doctor in the 'Malade Imaginaire'—"y mettre le nez." I observe a paper in the last 'Contemporary Review,' announcing for a discovery patent to all mankind that the colours of flowers were made "to attract insects"! †

* It is, I believe, Sowerby's *Viola Lutea*, 721 of the old edition, there painted with purple upper petals; but he says in the text, "Petals either all yellow, or the two uppermost are of a blue purple, the rest yellow with a blue tinge: very often the whole are purple."

† Did the wretch never hear bees in a lime tree then, or ever see one a star gentian?

They will next hear that the rose was made for the canker, and the body of man for the worm.

43. What the colours of flowers, or of birds, or of precious stones, or of the sea and air, and the blue mountains, and the evening and the morning, and the clouds of Heaven, were given for—they only know who can see them and can feel, and who pray that the sight and the love of them may be prolonged, where cheeks will not fade, nor sunsets die.

44. And now, to close, let me give you some fuller account of the reasons for the naming of the order to which the violet belongs, 'Cytherides.'

You see that the Uranides, are, as far as I could so gather them, of the pure blue of the sky; but the Cytherides of altered blue;—the first, Viola, typically purple; the second, Veronica, pale blue with a peculiar light; the third, *Giulietta*, deep blue, passing strangely into a subdued green before and after the full life of the flower.

All these three flowers have great strangenesses in them, and weaknesses; the Veronica most wonderful in its connection with the poisonous tribe of the foxgloves; the *Giulietta*, alone among flowers in the action of the shielding leaves; and the Viola, grotesque and inexplicable in its hidden structure, but the most sacred of all flowers to earthly and daily Love, both in its scent and glow.

Now, therefore, let us look completely for the meaning of the two leading lines,—

"Sweeter than the lids of Juno's eyes,
Or Cytherea's breath."

45. Since, in my present writings, I hope to bring into one focus the pieces of study fragmentarily given during past life, I may refer my readers to the first chapter of the 'Queen of the Air' for the explanation of the way in which all great myths are founded, partly on physical, partly on moral fact,—so that it is not possible for persons who neither know the aspect of nature, nor the constitution of the human soul, to understand a word of them. Naming the Greek Gods, therefore, you have first to think of the physical power they repre-

sent. When Horace calls Vulcan 'Avidus,' he thinks of him as the power of Fire; when he speaks of Jupiter's red right hand, he thinks of him as the power of rain with lightning; and when Homer speaks of Juno's dark eyes, you have to remember that she is the softer form of the rain power, and to think of the fringes of the rain-cloud across the light of the horizon. Gradually the idea becomes personal and human in the "Dove's eyes within thy locks,"* and "Dove's eyes by the river of waters" of the Song of Solomon.

46. "Or Cytherea's breath,"—the two thoughts of softest glance, and softest kiss, being thus together associated with the flower: but note especially that the Island of Cythera was dedicated to Venus because it was the chief, if not the only Greek island, in which the purple fishery of Tyre was established; and in our own minds should be marked not only as the most southern fragment of true Greece, but the virtual continuation of the chain of mountains which separate the Spartan from the Argive territories, and are the natural home of the brightest Spartan and Argive beauty which is symbolized in Helen.

47. And, lastly, in accepting for the order this name of Cytherides, you are to remember the names of Viola and Giulietta, its two limiting families, as those of Shakspeare's two most loving maids—the two who love simply, and to the death: as distinguished from the greater natures in whom earthly Love has its due part, and no more; and farther still from the greatest, in whom the earthly love is quiescent, or subdued, beneath the thoughts of duty and immortality.

It may be well quickly to mark for you the levels of loving temper in Shakspeare's maids and wives, from the greatest to the least.

48. 1. Isabel. All earthly love, and the possibilities of it, held in absolute subjection to the laws of God, and the judgments of His will. She is Shakspeare's only 'Saint.' Queen Catherine, whom you might next think of, is only an ordinary

* Septuagint, "the eyes of doves out of thy silence." Vulgate, "the eyes of doves, besides that which is hidden in them." Meaning—the *dim* look of love, beyond all others in sweetness.

woman of trained religious temper :—her maid of honour gives Wolsey a more Christian epitaph.

2. Cordelia. The earthly love consisting in diffused compassion of the universal spirit ; not in any conquering, personally fixed, feeling.

“ Mine enemy’s dog,
Though he had bit me, should have stood that night
Against my fire.”

These lines are spoken in her hour of openest direct expression ; and are *all* Cordelia.

Shakspeare clearly does not mean her to have been supremely beautiful in person ; it is only her true lover who calls her ‘ fair ’ and ‘ fairest ’—and even that, I believe, partly in courtesy, after having the instant before offered her to his subordinate duke ; and it is only *his* scorn of her which makes France fully care for her.

“ Gods, Gods, ’tis strange that from their cold neglect
My love should kindle to inflamed respect ! ”

Had she been entirely beautiful, he would have honoured her as a lover should, even before he saw her despised ; nor would she ever have been so despised—or by her father, misunderstood. Shakspeare himself does not pretend to know where her girl-heart was,—but I should like to hear how a great actress would say the “ Peace be with Burgundy ! ”

3. Portia. The maidenly passion now becoming great, and chiefly divine in its humility, is still held absolutely subordinate to duty ; no thought of disobedience to her dead father’s intention is entertained for an instant, though the temptation is marked as passing, for that instant, before her crystal strength. Instantly, in her own peace, she thinks chiefly of her lover’s ;—she is a perfect Christian wife in a moment, coming to her husband with the gift of perfect Peace,—

“ Never shall you lie by Portia’s side
With an unquiet soul.”

She is highest in intellect of all Shakspeare’s women, and this is the root of her modesty ; her ‘ unlettered girl ’ is like

"Mark it, Cesario,—it is old and plain,
The spinsters and the knitters in the sun,
And the free maids, that *weave their thread with bones*,
Do use to chaunt it."

(They, the unconscious Fates, weaving the fair vanity of life
with death); and the burden of it is—

"My part of Death, no one so true
Did share it."

Therefore she says, in the great first scene, "Was not *this*
love indeed?" and in the less heeded closing one, her heart
then happy with the knitters in the *sun*,

"And all those sayings will I over-swear,
And all those swearings keep as true in soul
As doth that orb'd continent the Fire
That severs day from night."

Or, at least, did once sever day from night,—and perhaps does
still in Illyria. Old England must seek new images for her
loves from gas and electric sparks,—not to say furnace fire.

I am obliged, by press of other work, to set down these
notes in cruel shortness: and many a reader may be disposed
to question utterly the standard by which the measurement is
made. It will not be found, on reference to my other books,
that they encourage young ladies to go into convents; or
undervalue the dignity of wives and mothers. But, as surely
as the sun *does* sever day from night, it will be found always
that the noblest and loveliest women are dutiful and religious
by continual nature; and their passions are trained to obey
them; like their dogs. Homer, indeed, loves Helen with all
his heart, and restores her, after all her naughtiness, to the
queenship of her household; but he never thinks of her as
Penelope's equal, or Iphigenia's. Practically, in daily life, one
often sees married women as good as saints; but rarely, I
think, unless they have a good deal to bear from their hus-
bands. Sometimes also, no doubt, the husbands have some
trouble in managing St. Cecilia or St. Elizabeth; of which
questions I shall be obliged to speak more seriously in another

place: content, at present, if English maids know better, by Proserpina's help, what Shakspeare meant by the dim, and Milton by the glowing, violet.

CHAPTER II.

PINGUICULA.

(Written in early June, 1881.)

1. On the rocks of my little stream, where it runs, or leaps, through the moorland, the common *Pinguicula* is now in its perfectest beauty; and it is one of the offshoots of the violet tribe which I have to place in the minor collateral groups of *Viola* very soon, and must not put off looking at it till next year.

There are three varieties given in Sowerby: 1. *Vulgaris*, 2. Greater-flowered, and 3. *Lusitanica*, white, for the most part, pink, or 'carnea,' sometimes: but the proper colour of the family is violet, and the perfect form of the plant is the 'vulgar' one. The larger-flowered variety is feebler in colour, and ruder in form: the white Spanish one, however, is very lovely, as far as I can judge from Sowerby's (*old* Sowerby's) pretty drawing.

The 'frequent' one (I shall usually thus translate '*vulgaris*'), is not by any means so 'frequent' as the Queen violet, being a true wild-country, and mostly Alpine, plant; and there is also a real '*Pinguicula Alpina*,' which we have not in England, who might be the Regina, if the group were large enough to be reigned over: but it is better not to affect Royalty among these confused, intermediate, or dependent families.

2. In all the varieties of *Pinguicula*, each blossom has one stalk only, growing from the *ground*; and you may pull all the leaves away from the base of it, and keep the flower only, with its bunch of short fibrous roots, half an inch long; looking as if bitten at the ends. Two flowers, characteristically, —three and four very often,—spring from the same root, in places where it grows luxuriantly; and luxuriant growth

means that clusters of some twenty or thirty stars may be seen on the surface of a square yard of boggy ground, quite to its mind ; but its real glory is in harder life, in the crannies of well-wetted rock.

3. What I have called 'stars' are irregular clusters of approximately, or tentatively, five aloeine ground leaves, of very pale green,—they may be six or seven, or more, but always run into a rudely pentagonal arrangement, essentially first trine, with two succeeding above. Taken as a whole the *plant* is really a main link between violets and Droseras ; but the *flower* has much more violet than Drosera in the make of it,—spurred, and *five-petaled*,* and held down by the top of its bending stalk as a violet is ; only its upper two petals are not reverted—the calyx, of a dark soppy green, holding them down, with its three front sepals set exactly like a strong

* When I have the chance, and the time, to submit the proofs of 'Proserpina' to friends who know more of Botany than I, or have kindness enough to ascertain debateable things for me, I mean in future to do so,—using the letter A to signify Amicus, generally ; with acknowledgment by name, when it is permitted, of especial help or correction. Note first of this kind : I find here on this word, 'five-petaled,' as applied to Pinguicula, "Qy. two-lipped ? it is monopetalous, and monosepalous, the calyx and corolla being each all in one piece."

Yes ; and I am glad to have the observation inserted. But my term, 'five-petaled,' must stand. For the question with me is always first, not how the petals are connected, but how many they are. Also I have accepted the term petal—but never the word lip—as applied to flowers. The generic term 'Labiate' is cancelled in 'Proserpina,' 'Vestales' being substituted ; and these flowers, when I come to examine them, are to be described, not as divided into two lips, but into hood, apron, and side-pockets. Farther, the depth to which either calyx or corolla is divided, and the firmness with which the petals are attached to the torus, may, indeed, often be an important part of the plant's description, but ought not to be elements in its definition. Three petaled and three-sepaled, four-petaled and four-sepaled, five-petaled and five-sepaled, etc., etc., are essential—with me, primal—elements of definition ; next, whether resolute or stellar in their connection ; next, whether round or pointed, etc. Fancy, for instance, the fatality to a rose of pointing its petals, and to a lily, of rounding them ! But how deep cut, or how hard holding, is quite a minor question.

Farther, that all plants *are* petaled and sepaled, and never mere cups in saucers, is a great fact. not to be dwelt on in a note.

trident, its two backward sepals clasping the spur. There are often six sepals, four to the front, but the normal number is five. Tearing away the calyx, I find the flower to have been held by it as a lion might hold his prey by the loins if he missed its throat; the blue petals being really campanulate, and the flower best described as a dark bluebell, seized and crushed almost flat by its own calyx in a rage. Pulling away now also the upper petals, I find that what are in the violet the lateral and well-ordered fringes, are here thrown mainly on the lower (largest) petal near its origin, and opposite the point of the seizure by the calyx, spreading from this centre over the surface of the lower petals, partly like an irregular shower of fine Venetian glass broken, partly like the wild-flung Medusa-like embroidery of the white Lucia.*

4. The calyx is of a dark *soppy* green, I said; like that of sugary preserved citron; the root leaves are of green just as soppy, but pale and yellowish, as if they were half decayed; the edges curled up and, as it were, water-shrivelled, as one's fingers shrivel if kept too long in water. And the whole plant looks as if it had been a violet unjustly banished to a bog, and obliged to live there—not for its own sins, but for some Emperor Pansy's, far away in the garden,—in a partly boggy, partly hoggish manner, drenched and desolate; and with something of demoniac temper got into its calyx, so that it quarrels with, and bites the corolla;—something of gluttonous and greasy habit got into its leaves; a discomfortable sensuality, even in its desolation. Perhaps a penguin-ish life would be truer of it than a piggish, the *nest* of it being indeed on the rock, or morassy rock-investiture, like a sea-bird's on her rock ledge.

5. I have hunted through seven treatises on botany, namely Loudon's Encyclopædia, Balfour, Grindon, Oliver, Baxter of Oxford, Lindley ('Ladies' Botany'), and Figuier, without being able to find the meaning of 'Lentibulariaceæ,' to which

* Our 'Lucia Nivea,' 'Blanche Lucy;' in present botany, Bog bean! having no connection whatever with any manner of bean, but only a slight resemblance to bean-leaves in its own lower ones. Compare Ch. IV. § 11.

tribe the *Pinguicula* is said by them all (except Figuiet) to belong. It may perhaps be in Sowerby ; * but these above-named treatises are precisely of the kind with which the ordinary scholar must be content : and in all of them he has to learn this long, worse than useless, word, under which he is betrayed into classing together two orders naturally quite distinct, the Butterworts and the Bladderworts.

Whatever the name may mean—it is bad Latin. There is such a word as *Lenticularis*—there is no *Lentibularis* ; and it must positively trouble us no longer.†

The Butterworts are a perfectly distinct group—whether small or large, always recognizable at a glance. Their proper Latin name will be *Pinguicula*, (plural *Pinguiculæ*.)—their

* It is not. (Resolute negative from A., unsparing of time for me ; and what a state of things it all signifies !)

† With the following three notes, 'A' must become a definitely and gratefully interpreted letter. I am indebted for the first, conclusive in itself, but variously supported and confirmed by the two following, to R. J. Mann, Esq., M.D., long ago a pupil of Dr. Lindley's, and now on the council of Whitelands College, Chelsea:—for the second, to Mr. Thomas Moore, F.L.S., the kind Keeper of the Botanic Garden at Chelsea ; for the third, which will be farther on useful to us, to Miss Kemm, the botanical lecturer at Whitelands.

(1) There is no explanation of *Lentibulariaceæ* in Lindley's 'Vegetable Kingdom.' He was not great in that line. The term is, however, taken from *Lenticula*, the lentil, in allusion to the lentil-shaped air-bladders of the typical genus *Utricularia*.

The change of the c into b may possibly have been made only from some euphonic fancy of the contriver of the name, who, I think, was Rich.

But I somewhat incline myself to think that the *tibia*, a pipe or flute, may have had something to do with it. The *tibia* may possibly have been diminished into a little pipe by a stretch of licence, and have become *tibula* : [but *tibulus* is a kind of pine tree in Pliny] ; when *Lentibula* would be the lens or lentil-shaped pipe or bladder. I give you this only for what it is worth. The *lenticula*, as a derivation, is reliable and has authority.

Lenticula, a lentil, a freckly eruption ; *lenticularis*, lentil-shaped ; so the nat. ord. ought to be (if this be right) *lenticulariaceæ*.

(2) BOTANIC GARDENS, CHELSEA, Feb. 14, 1882.

Lentibularia is an old generic name of Tournefort's, which has been superseded by *utricularia*, but, oddly enough, has been retained in the

English, Bog-Violet, or, more familiarly, Butterwort; and their French, as at present, *Grassette*.

The families to be remembered will be only five, namely,

1. *Pinguicula Major*, the largest of the group. As bog plants, Ireland may rightly claim the noblest of them, which certainly grow there luxuriantly, and not (I believe) with us. Their colour is, however, more broken and less characteristic than that of the following species.

2. *Pinguicula Violacea*: Violet-coloured Butterwort, (instead of 'vulgaris,') the common English and Swiss kind above noticed.

3. *Pinguicula Alpina*: Alpine Butterwort, white and much smaller than either of the first two families; the spur especially small, according to D. 453. Much rarer, as well as smaller, than the other varieties in Southern Europe. "In Britain, known only upon the moors of Roschaugh, Rosshire, where the progress of cultivation seems likely soon to efface it. (Grindon.)

4. *Pinguicula Pallida*: Pale Butterwort. From Sowerby's drawing, (135, vol. iii.,) it would appear to be the most delicate and lovely of all the group. The leaves, "like those of other species, but rather more delicate and pellucid, reticulated with red veins, and much involute in the margin. Tube of the corolla, yellow, streaked with red, (the streaks like those of a pansy); the petals, pale violet. It much resem-

name of the order *lentibularæ*; but it probably comes from *lenticula*, which signifies the little root bladders, somewhat resembling lentils.

(3) 'Manual of Scientific Terms,' Stormonth, p. 234.

Lentibulariaceæ, neuter, plural.

(*Lenticula*, the shape of a lentil; from *lens*, a lentil.) The Butterwort family, an order of plants so named from the lenticular shape of the air-bladders on the branches of *utricularia*, one of the genera. (But observe that the *Butterworts* have nothing of the sort, any of them.—R.)

London.—"Floaters."

Lindley.—"Sometimes with whorled vesicles."

In Nuttall's Standard (?) Pronouncing Dictionary, it is given,—

Lenticularæa, a nat. ord. of marsh plants, which thrive in water or marshes.

bles *Villosa*, (our *Minima*, No. 5,) in many particulars, the stem being hairy, and in the lower part the hairs tipped with a viscid fluid, like a sundew. But the *Villosa* has a slender sharp spur; and in this the spur is blunt and thick at the end." (Since the hairy stem is not peculiar to *Villosa*, I take for her, instead, the epithet *Minima*, which is really definitive.)

The pale one is commonly called '*Lusitanica*,' but I find no direct notice of its Portuguese habitation. Sowerby's plant came from Blandford, Dorsetshire; and Grindon says it is frequent in Ireland, abundant in Arran, and extends on the western side of the British island from Cornwall to Cape Wrath. My epithet, *Pallida*, is secure, and simple, wherever the plant is found.

5. *Pinguicula Minima*: Least Butterwort; in D. 1021 called *Villosa*, the *scape* of it being hairy. I have not yet got rid of this absurd word '*scape*,' meaning, in botanist's Latin, the flower-stalk of a flower growing out of a cluster of leaves on the ground. It is a bad corruption of '*sceptre*,' and especially false and absurd, because a true sceptre is necessarily branched.* In '*Proserpina*,' when it is spoken of distinctively, it is called '*virgula*' (see vol. i., pp. 112, 115, 116). The hairs on the *virgula* are in this instance so minute, that even with a lens I cannot see them in the Danish plate: of which Fig. 3 is a rough translation into woodcut, to show the grace and mien of the little thing. The trine leaf cluster is characteristic, and the folding up of the leaf edges. The flower, in the Danish plate, full purple. Abundant in east of *Finmark* (Finland?), but *always growing in marsh moss*, (*Sphagnum palustre*.)

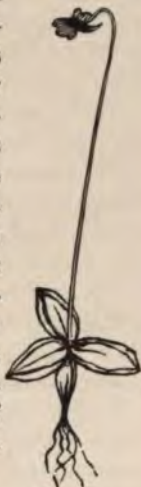


FIG. 3.

6. I call it '*Minima*' only, as the least of the five here named: without putting forward any claim for it to be the smallest *pinguicula* that ever was or will be. In such sense

* More accurately, shows the pruned roots of branches,—*ἐπειδὴ πρῶτα τομήν ἐν ὕρεσσι λέλοιπεν*. The *pruning* is the mythic expression of the subduing of passion by rectorial law.

only, the epithets minima or maxima are to be understood when used in 'Proserpina': and so also, every statement and every principle is only to be understood as true or tenable, respecting the plants which the writer has seen, and which he is sure that the reader can easily see: liable to modification to any extent by wider experience; but better first learned securely within a narrow fence, and afterwards trained or fructified, along more complex trellises.

7. And indeed my readers—at least, my newly found readers—must note always that the only power which I claim for any of my books, is that of being right and true as far as they reach. None of them pretend to be Kosmoses;—none to be systems of Positivism or Negativism, on which the earth is in future to swing instead of on its old worn-out poles;—none of them to be works of genius;—none of them to be, more than all true work *must* be, pious;—and none to be, beyond the power of common people's eyes,* ears, and noses, 'aesthetic.' They tell you that the world is *so* big, and can't be made bigger—that you yourself are also *so* big, and can't be made bigger, however you puff or bloat yourself; but that, on modern mental nourishment, you may very easily be made smaller. They tell you that two and two are four, that ginger is hot in the mouth, that roses are red, and smuts black. Not themselves assuming to be pious, they yet assure you that there is such a thing as piety in the world, and that it is wiser than impiety; and not themselves pretending to be works of genius, they yet assure you that there is such a thing as genius in the world, and that it is meant for the light and delight of the world.

8. Into these repetitions of remarks on my work, often made before, I have been led by an unlucky author who has just sent me his book, advising me that it is "neither critical nor sentimental" (he had better have said in plain English "without either judgment or feeling"), and in which nearly

*The bitter sorrow with which I first recognized the extreme rarity of finely-developed organic sight is expressed enough in the lecture on the Mystery of Life, added in the large edition of 'Sesame and Lilies.'

the first sentence I read is—"Solomon with all his acuteness was not wise enough to . . . etc., etc., etc." ('give the Jews the British constitution,' I believe the man means.) He is not a whit more conceited than Mr. Herbert Spencer, or Mr. Goldwin Smith, or Professor Tyndall,—or any lively London apprentice out on a Sunday ; but this general superciliousness with respect to Solomon, his Proverbs, and his politics, characteristic of the modern Cockney, Yankee, and Anglicised Scot, is a difficult thing to deal with for us of the old school, who were well whipped when we were young ; and have been in the habit of occasionally ascertaining our own levels as we grew older, and of recognizing that, here and there, somebody stood higher, and struck harder.

9. A difficult thing to deal with, I feel more and more, hourly, even to the point of almost ceasing to write ; not only every feeling I have, but, of late, even *every word I use*, being alike inconceivable to the insolence, and unintelligible amidst the slang, of the modern London writers. Only in the last magazine I took up, I found an article by Mr. Goldwin Smith on the Jews (of which the gist—as far as it had any—was that we had better give up reading the Bible), and in the text of which I found the word 'tribal' repeated about ten times in every page. Now, if 'tribe' makes tribal, tube must make tubal, cube, cubal, and gibe, gibal ; and I suppose we shall next hear of tubal music, cubal minerals, and gibal conversation ! And observe how all this bad English leads instantly to blunder in thought, prolonged indefinitely. The Jewish Tribes are not separate races, but the descendants of brothers. The Roman Tribes, political divisions ; essentially Trine : and the whole force of the word Tribune vanishes, as soon as the ear is wrung into acceptance of his lazy innovation by the modern writer. Similarly, in the last elements of mineralogy I took up, the first order of crystals was called 'tesseral' ; the writer being much too fine to call them 'four-al,' and too much bent on distinguishing himself from all previous writers to call them cubic.

10. What simple schoolchildren, and sensible schoolmasters, are to do in this atmosphere of Egyptian marsh,

which rains fools upon them like frogs, I can no more with any hope or patience conceive ;—but this finally I repeat, concerning my own books, that they are written in honest English, of good Johnsonian lineage, touched here and there with colour of a little finer or Elizabethan quality : and that the things they tell you are comprehensible by any moderately industrious and intelligent person ; and *accurate*, to a degree which the accepted methods of modern science cannot, in my own particular fields, approach.

11. Of which accuracy, the reader may observe for immediate instance, my extrication for him, from among the *Uvularias*, of these five species of the Butterwort ; which, being all that need be distinctly named and remembered, *do* need to be first carefully distinguished, and then remembered in their companionship. So alike are they, that Gerard makes no distinction among them ; but masses them under the general type of the frequent English one, described as the second kind of his promiscuous group of ‘*Sanicle*,’ “which Clusius calleth *Pinguicula* ; not before his time remembered, hath sundry small thick leaves, fat and full of juice, being broad towards the root and sharp towards the point, of a faint green colour, and bitter in taste ; out of the midst whereof sprouteth or shooteth up a naked slender stalke nine inches long, every stalke bearing one flower and no more, sometimes white, and sometimes of a bluish purple colour, fashioned like unto the common Monkshoods” (he means Larkspurs) “called *Consolida Regalis*, having the like spur or Lark’s heel attached thereto.” Then after describing a third kind of *Sanicle*—(*Cortusa Mathioli*, a large-leaved Alpine *Primula*,) he goes on : “These plants are strangers in England ; their natural country is the alpine mountains of Helvetia. They grow in my garden, where they flourish exceedingly, except Butterwort, which groweth in our English *squally* wet grounds,”—(‘*Squally*,’ I believe, here, from *squalidus*, though Johnson does not give this sense ; but one of his quotations from Ben Jonson touches it nearly : “Take heed that their new flowers and sweetness do not as much corrupt as the others’ dryness and squalor,”—and note farther that the word ‘*squall*,’ in the

sense of gust, is not pure English, but the Arabic 'Chual' with an s prefixed:—the English word, a form of 'squeal,' meaning a child's cry, from Gothic 'Squæla' and Icelandic 'squilla,' would scarcely have been made an adjective by Gerarde),—"and will not yield to any culturing or transplanting: it groweth especially in a field called Cragge Close, and at Crosbie Ravenswaihthe, in Westmerland; (West-*mere*-land you observe, not *mor*) upon Ingleborough Fells, twelve miles from Lancaster, and by Harwoode in the same county near to Blackburn: ten miles from Preston, in Anderness, upon the bogs and marish ground, and in the boggie meadows about Bishop's-Hatfield, and also in the fens in the way to Wittles Meare" (Roger Wildrake's Squattlesea Mere?) "from Fendon, in Huntingdonshire." Where doubtless Cromwell ploughed it up, in his young days, pitilessly; and in nowise pausing, as Burns beside his fallen daisy."

12. Finally, however, I believe, we may accept its English name of 'Butterwort' as true Yorkshire, the more enigmatic form of 'Pigwilly' preserving the tradition of the flowers once abounding, with softened Latin name, in Pigwilly bottom, close to Force bridge, by Kendal. Gerarde draws the English variety as "*Pinguicula sive Sanicula Eboracensis*,—Butterwort, or Yorkshire Sanicle;" and he adds: "The husbandmen's wives of Yorkshire do use to anoint the dugs of their kine with the fat and oilous juice of the herb Butterwort when they be bitten of any venomous worm, or chapped, rifted and hurt by any other means."

13. In Lapland it is put to much more certain use; "it is called Tâtgrass, and the leaves are used by the inhabitants to make their 'tât miolk,' a preparation of milk in common use among them. Some fresh leaves are laid upon a filter, and milk, yet warm from the reindeer, is poured over them. After passing quickly through the filter, this is allowed to rest for one or two days until it becomes ascendent,* when it is found not to have separated from the whey, and yet to have attained much greater tenacity and consistence than it would have done otherwise. The Laplanders and Swedes are said to be ex-

* Lat. *acesco*, to turn sour.

CHAPTER III.

VERONICA.

1. "THE Corolla of the Foxglove," says Dr. Lindley, beginning his account of the tribe at page 195 of the first volume of his 'Ladies' Botany,' "is a large inflated body (I), with its throat spotted with rich purple, and its border divided obliquely into five very short lobes, of which the two upper are the smaller; its four stamens are of unequal length, and its style is divided into two lobes at the upper end. A number of long hairs cover the ovary, which contains two cells and a great quantity of ovules.

"This" (sc. information) "will show you what is the usual character of the Foxglove tribe; and you will find that all the other genera referred to it in books agree with it essentially, although they differ in subordinate points. It is chiefly (A) in the form of the corolla, (B) in the number of the stamens, (C) in the consistence of the rind of the fruit, (D) in its form, (E) in the number of the seeds it contains, and (F) in the manner in which the sepals are combined, that these differences consist."

2. The enumerative letters are of my insertion—otherwise the above sentence is, word for word, Dr. Lindley's,—and it seems to me an interesting and memorable one in the history of modern Botanical science. For it appears from the tenor of it, that in a scientific botanist's mind, six particulars, at least, in the character of a plant, are merely 'subordinate points,'—namely,

1. (F) The combination of its calyx,
2. (A) The shape of its corolla,
3. (B) The number of its stamens,
4. (D) The form of its fruit,
5. (C) The consistence of its shell,—and
6. (E) The number of seeds in it.

Abstracting, then, from the primary description, all the six inessential points, I find the three essential ones left are, that

the style is divided into two lobes at the upper end, that a number of glandular hairs cover the ovary, and that this latter contains two cells.

3. None of which particulars concern any reasonable mortal, looking at a Foxglove, in the smallest degree. Whether hairs which he can't see are glandular or bristly,—whether the green knobs, which are left when the purple bells are gone, are divided into two lobes or two hundred,—and whether the style is split, like a snake's tongue, into two lobes, or like a rogue's, into any number—are merely matters of vulgar curiosity; which he needs a microscope to discover, and will lose a day of his life in discovering. But if any pretty young Proserpina, escaped from the Plutonic durance of London, and carried by the tubular process, which replaces Charon's boat, over the Lune at Lancaster, cares to come and walk on the Coniston hills in a summer morning, when the eyebright is out on the high fields, she may gather, with a little help from Brantwood garden, a bouquet of the entire Foxglove tribe in flower, as it is at present defined, and may see what they are like, altogether.

4. She shall gather : first, the Euphrasy, which makes the turf on the brow of the hill glitter as if with new-fallen manna ; then, from one of the blue clusters on the top of the garden wall, the common bright blue Speedwell ; and, from the garden bed beneath, a dark blue spire of *Veronica spicata* ; then, at the nearest opening into the wood, a little foxglove in its first delight of shaking out its bells ; then—what next does the Doctor say ?—a snapdragon ? we must go back into the garden for that—here is a goodly crimson one, but what the little speedwell will think of him for a relative I can't think ! —a mullein ?—that we must do without for the moment ; a monkey flower ?—that we will do without, altogether ; a lady's slipper ?—say rather a goblin's with the gout ! but, such as the flower-cobbler has made it, here is one of the kind that people praise, out of the greenhouse,—and yet a figwort we must have, too ; which I see on referring to Loudon, may be balm-leaved, hemp-leaved, tansy-leaved, nettle-leaved, wing-leaved, heart-leaved, ear-leaved, spear-leaved, or lyre-leaved.

I think I can find a balm-leaved one, though I don't know what to make of it when I've got it, but it's called a 'Scorodonia' in Sowerby, and something very ugly besides;—I'll put a bit of *Teucrium Scorodonia* in, to finish: and now—how will my young Proserpina arrange her bouquet, and rank the family relations to their contentment?

5. She has only one kind of flowers in her hand, as botanical classification stands at present; and whether the system be more rational, or in any human sense more scientific, which puts calceolaria and speedwell together,—and foxglove and euphrasy; and runs them on one side into the mints, and on the other into the nightshades;—naming them, meanwhile, some from diseases, some from vermin, some from blockheads, and the rest anyhow:—or the method I am pleading for, which teaches us, watchful of their seasonable return and chosen abiding places, to associate in our memory the flowers which truly resemble, or fondly companion, or, in time kept by the signs of Heaven, succeed, each other; and to name them in some historical connection with the loveliest fancies and most helpful faiths of the ancestral world—Proserpina be judge; with every maid that sets flowers on brow or breast—from Thule to Sicily.

6. We will unbind our bouquet, then, and putting all the rest of its flowers aside, examine the range and nature of the little blue cluster only.

And first—we have to note of it, that the plan of the blossom in all the kinds is the same; an irregular quatrefoil: and irregular quatrefoils are of extreme rarity in flower form. I don't myself know *one*, except the Veronica. The cruciform vegetables—the heaths, the olives, the lilacs, the little *Tormentillas*, and the poppies, are all perfectly symmetrical. Two of the petals, indeed, as a rule, are different from the other two, except in the heaths; and thus a distinctly crosslet form obtained, but always an equally balanced one: while in the Veronica, as in the Violet, the blossom always refers itself to a supposed place on the stalk with respect to the ground; and the upper petal is always the largest.

The supposed place is often very supposititious indeed—for

clusters of the common veronicas, if luxuriant, throw their blossoms about anywhere. But the idea of an upper and lower petal is always kept in the flower's little mind.

7. In the second place, it is a quite open and flat quatrefoil—so separating itself from the belled quadrature of the heath, and the tubed and primrose-like quadrature of the cruciferae; and, both as a quatrefoil, and as an open one, it is separated from the foxgloves and snapdragons, which are neither quatrefoils, nor open; but are cinqfoils shut up!

8. In the third place, open and flat though the flower be, it is monopetalous; all the four arms of the cross strictly becoming one in the centre; so that, though the blue foils *look* no less sharply separate than those of a buttercup or a cistus; and are so delicate that one expects them to fall from their stalk if we breathe too near,—do but lay hold of one,—and, at the touch, the entire blossom is lifted from its stalk, and may be laid, in perfect shape, on our paper before us, as easily as if it had been a nicely made-up blue bonnet, lifted off its stand by the milliner.

I pause here, to consider a little; because I find myself mixing up two characteristics which have nothing necessary in their relation;—namely, the unity of the blossom, and its coming easily off the stalk. The separate petals of the cistus and cherry fall as easily as the foxglove drops its bells;—on the other hand, there are monopetalous things that don't drop, but hold on like the convoluta,* and make the rest of the tree sad for their dying. I do not see my way to any systematic noting of decadent or persistent corolla; but, in passing, we may thank the veronica for never allowing us to see how it fades,† and being always cheerful and lovely, while it is with us.

* I find much more difficulty, myself, being old, in using my altered names for species than my young scholars will. In watching the bells of the purple bindweed fade at evening, let them learn the fourth verse of the prayer of Hezekiah, as it is in the Vulgate—"Generatio mea ablata est, et convoluta est a me, sicut tabernaculum pastoris,"—and they will not forget the name of the fast-fading—ever renewed—"belle d'un jour."

† "It is Miss Cobbe, I think, who says, 'all wild flowers know how to die gracefully.'"—A.

9. And for a farther specialty, I think we should take note of the purity and simplicity of its *floral* blue, not sprinkling itself with unwholesome sugar like a larkspur, nor varying into coppery or turquoise-like hue as the forget-me-not ; but keeping itself as modest as a blue print, pale, in the most frequent kinds ; but pure exceedingly ; and rejoicing in fellowship with the grey of its native rocks. The palest of all I think it will be well to remember as Veronica Clara, the "Poor Clare" of Veronicas. I find this note on it in my diary,—

'The flower of an exquisite grey-white, like lichen, or shaded hoar-frost, or dead silver ; making the long-weathered stones it grew upon perfect with a finished modesty of paleness, as if the flower *could* be blue, and would not, for their sake. Laying its fine small leaves along in embroidery, like *Anagallis tenella*,—indescribable in the tender feebleness of it—afterwards as it grew, dropping the little blossoms from the base of the spire, before the buds at the top had blown. Gathered, it was happy beside me, with a little water under a stone, and put out one pale blossom after another, day by day.'

10. Lastly, and for a high worthiness, in my estimate, note that it is *wild*, of the wildest, and proud in pure descent of race ; submitting itself to no follies of the cur-breeding florist. Its species, though many resembling each other, are severally constant in aspect, and easily recognizable ; and I have never seen it provoked to glare into any gigantic impudence at a flower show. Fortunately, perhaps, it is scentless, and so despised.

11. Before I attempt arranging its families, we must note that while the corolla itself is one of the most constant in form, and so distinct from all other blossoms that it may be always known at a glance ; the leaves and habit of growth vary so greatly in families of different climates, and those born for special situations, moist or dry, and the like, that it is quite impossible to characterize Veronic, or Veronique, vegetation in general terms. One can say, comfortably, of a strawberry, that it is a creeper, without expecting at the next moment to

see a steeple of strawberry blossoms rise to contradict us;—we can venture to say of a foxglove that it grows in a spire, without any danger of finding, farther on, a carpet of prostrate and entangling digitalis; and we may pronounce of a buttercup that it grows mostly in meadows without fear of finding ourselves at the edge of the next thicket, under the shadow of a buttercup-bush growing into valuable timber. But the Veronica reclines with the lowly,* upon occasion, and aspires, with the proud; is here the pleased companion of the ground-ivies, and there the unrebuked rival of the larkspurs: on the rocks of Coniston it effaces itself almost into the film of a lichen; it pierces the snows of Iceland with the gentian: and in the Falkland Islands is a white-blossomed evergreen, of which botanists are in dispute whether it be Veronica or Olive.

12. Of these many and various forms, I find the manners and customs alike inconstant; and this of especially singular in them—that the Alpine and northern species bloom hardly in contest with the retiring snows, while with us they wait till the spring is past, and offer themselves to us only in consolation for the vanished violet and primrose. As we farther examine the ways of plants, I suppose we shall find some that determine upon a fixed season, and will bloom methodically in June or July, whether in Abyssinia or Greenland; and others, like the violet and crocus, which are flowers of the spring, at whatever time of the favouring or frowning year the spring returns to their country. I suppose also that botanists and gardeners know all these matters thoroughly: but they don't put them into their books, and the clear notions of them only come to me now, as I think and watch.

13. Broadly, however, the families of the Veronica fall into three main divisions,—those which have round leaves lobed at the edge, like ground ivy; those which have small thyme-like leaves; and those which have long leaves like a foxglove's, only smaller—never more than two or two and a half inches long. I therefore take them in these connections, though without any bar between the groups; only separating the Re-

* See distinction between recumbent and rampant herbs, below, under 'Veronica Agrestis,' p. 212.

gina from the other thyme-leaved ones, to give her due precedence; and the rest will then arrange themselves into twenty families, easily distinguishable and memorable.

I have chosen for *Veronica Regina*, the brave Icelandic one, which pierces the snow in first spring, with lovely small shoots of perfectly set leaves, no larger than a grain of wheat; the



FIG. 4.

flowers in a lifted cluster of five or six together, not crowded, yet not loose; large, for veronica—about the size of a silver penny, or say half an inch across—deep blue, with ruby centre.

My woodcut, Fig. 4, is outlined* from the beautiful en-

* 'Abstracted' rather, I should have said, and with perfect skill, by Mr. Collingwood (the joint translator of Xenophon's *Economics* for the 'Bibliotheca Pastorum'). So also the next following cut, Fig. 5.

graving D. 342,*—there called 'fruticulosa,' from the number of the young shoots.

14. Beneath the Regina, come the twenty easily distinguished families, namely :—

1. Chamædrys. 'Ground-oak.' I cannot tell why called—its small and rounded leaves having nothing like leaves about them, except the serration, which is common half, at least, of all leaves that grow. But the idea is all over Europe, apparently. Fr. 'petit chêne : ' German and English 'Germander,' a merely corrupt form of Chamædrys.

The representative English veronica "Germander Speedwell"—very prettily drawn in S. 986 ; too tall and weedy in D. 448.

2. Hederifolia. Ivy-leaved : but more properly, cymbalaria-leaved. It is the English field representative, though blue-flowered, of the Byzantine white veronica, V. Cymbalaria, very beautifully drawn in G. 9. Hederifolia well in D. 428.

3. Agrestis. Fr. 'Rustique.' We ought however clearly to understand whether 'agrestis,' used by English botanists, is meant to imply a literally field flower, or only a 'rustic' one, which might as properly grow in a wood. 'I shall always myself use 'agrestis' in the literal sense, and 'rustica' for 'rustique.' I see no reason, in the present case, for separating the Polite from the Rustic flower : the agrestis, D. 449.

* Of the references, henceforward necessary to the books I have used as authorities, the reader will please note the following abbreviations :—

C. Curtis's Magazine of Botany.

D. Flora Danica.

F. Figuier.

G. Sibthorpe's Flora Græca.

L. Linnæus. Systema Naturæ.

L. S. Linnæus's Flora Suecica. But till we are quite used to the other letters, I print this reference in words.

L. N. William Curtis's Flora Londinensis. Of the exquisite plates engraved for this book by James Sowerby, note is taken in the close of next chapter.

O. Sowerby's English Wild Flowers ; the old edition in thirty-two thin volumes—far the best.

S. Sowerby's English Wild Flowers ; the modern edition in ten volumes.

and S. 971, seems to me not more meekly recumbent, nor more frankly cultureless, than the so-called Polita, S. 972: there seems also no French acknowledgment of its politeness, and the Greek family, G. 8, seem the rudest and wildest of all.

Quite a *field* flower it is, I believe, lying always low on the ground, recumbent, but not creeping. Note this difference: no fastening roots are thrown out by the reposing stems of this Veronica; a creeping or accurately 'rampant' plant roots itself in advancing. Conf. Nos. 5, 6.

4. *Arvensis*. We have yet to note a still finer distinction in epithet. 'Agrestis' will properly mean a flower of the open ground—yet not caring whether the piece of earth be cultivated or not, so long as it is under clear sky. But when agriculture has turned the unfruitful acres into 'arva beata,'—if then the plant thrust itself between the furrows of the plough, it is properly called 'Arvensis.'

I don't quite see my way to the same distinction in English,—perhaps I may get into the habit, as time goes on, of calling the Arvenses consistently furrow-flowers, and the Agrestes field-flowers. Furrow-veronica is a tiresomely long name, but must do for the present, as the best interpretation of its Latin character, "vulgatissima in cultis et arvis," D. 515. The blossom itself is exquisitely delicate; and we may be thankful, both here and in Denmark, for such a lovely 'vulgate.'

5. *Montana*. D. 1201. The first really creeping plant we have had to notice. It throws out roots from the recumbent stems. Otherwise like *agrestis*, it has leaves like ground-ivy. Called a wood species in the text of D.

6. *Persica*. An eastern form, but now perfectly naturalized here—D. 1982; S. 973. The flowers very large, and extremely beautiful, but only one springing from each leaf-axil.

Leaves and stem like *Montana*; and also creeping with new roots at intervals.

7. *Triphylla* (not *triphyllus*,—see *Flora Suecica*, 22). Meaning *trifid*-leaved; but the leaf is really divided into five lobes, not three—see S. 974, and G. 10. The palmate form of the leaf seems a mere caprice, and indicates no transi-

tional form in the plant: it may be accepted as only a momentary compliment of mimicry to the geraniums. The Siberian variety, 'multifida,' C. 1679, divides itself almost as the submerged leaves of the water-ranunculus.

The triphylla itself is widely diffused, growing alike on the sandy fields of Kent, and of Troy. In D. 627 is given an extremely delicate and minute northern type, the flowers springing as in Persica, one from each leaf-axil, and at distant intervals.

8. *Officinalis*. D. 248, S. 294. Fr. 'Veronique officinale'; (Germ. Gebrauchlicher Ehrenpreis,) our commonest English and Welsh speedwell; richest in cluster and frankest in roadside growth, whether on bank or rock; but assuredly liking *either* a bank or a rock, and the top of a wall better than the shelter of one. Uncountable 'myriads,' I am tempted to write, but, cautiously and literally, 'hundred' of blossoms—if one *could* count,—ranging certainly towards the thousand in some groups, all bright at once, make our Westmoreland lanes look as if they were decked for weddings, in early summer. In the Danish Flora it is drawn small and poor; its southern type being the true one: but it is difficult to explain the difference between the look of a flower which really *suffers*, as in this instance, by a colder climate, and becomes mean and weak, as well as dwarfed; and one which is braced and brightened by the cold, though diminished, as if under the charge and charm of an affectionate fairy, and becomes a joyfully patriotic inheritor of wilder scenes and skies. Medicinal, to soul and body alike, this gracious and domestic flower; though astringent and bitter in the juice. It is the Welsh deeply honoured 'Fluellen.'—See final note on the myth of Veronica, see § 18.

9. *Thymifolia*. Thyme-leaved, G. 6. Of course the longest possible word—*serpyllifolia*—is used in S. 978. It is a high mountain plant, growing on the top of Crete as the snow retires; and the Veronica minor of Gerarde; "the roote is small and threddie, taking hold of the *upper surface* of the earth, where it spreadeth." So also it is drawn as a creeper in F. 492, where the flower appears to be oppressed and concealed by the leafage.

10. *Minuta*, called '*hirsuta*' in S. 985: an ugly characteristic to name the lovely little thing by. The distinct blue lines in the petals might perhaps justify '*picta*' or '*lineata*,' rather than an epithet of size; but I suppose it is Gerarde's *Minima*, and so leave it, more safely named as '*minute*' than '*least*.' For I think the next variety may dispute the leastness.

11. *Verna*. D. 252. Mountains, in dry places in early spring. Upright, and confused in the leafage, which is sharp-pointed and close set, much hiding the blossom, but of extreme elegance, fit for a sacred foreground; as any gentle student will feel, who copies this outline from the *Flora Danica*, Fig. 5.

12. *Peregrina*. Another extremely small variety, nearly pink in colour, passing into bluish lilac and white. American; but called, I do not see why, '*Veronique voyageuse*,' by the French and Fremder Ehrenpreis in Germany. Given as a frequent English weed in S. 927.

13. *Alpina*. *Veronique des Alpes*. Gebirgs Ehrenpreis. Still minute; its scarcely distinct flowers forming a close head among the leaves; round-petalled in D. 16, but sharp, as usual, in S. 980. On the Norway Alps in grassy places; and in Scotland by the side of mountain rills; but rare. On Ben Nevis and Lachin y Gair (S.)

14. *Scutellata*. From the shield-like shape of its seed-vessels. *Veronique à Ecusson*; *Schildfruchtiger Ehrenpreis*. But the seed-vessels are more heart shape than shield. March Speedwell. S. 988, D. 209,—in the one pink, in the other blue; but again in D. 1561, pink.



FIG. 5.

"In flooded meadows, common." (D.) A spoiled and scattered form; the seeds too conspicuous, but the flowers very delicate, hence '*Gratiola minima*' in Gesner. The confused ramification of the clusters worth noting, in relation to the equally straggling fibres of root.

15. Spicata. S. 982: very prettily done, representing the inside of the flower as deep blue, the outside pale. The top of the spire, all calices, the calyx being indeed, through all the veronicas, an important and persistent member.

The tendency to arrange itself in spikes is to be noted as a degradation of the veronic character; connecting it on one side with the snapdragons, on the other with the ophryds. In *Veronica Ophrydea*, (C. 2210,) this resemblance to the contorted tribe is carried so far that "the corolla of the veronica becomes irregular, the tube gibbous, the faux (throat) hairy, and three of the laciniae (lobes of petals) variously twisted." The spire of blossom, violet-coloured, is then close set, and exactly resembles an ophryd, except in being sharper at the top. The engraved outline of the blossom is good, and very curious.

16. Gentianoides. This is the most directly and curiously imitative among the—shall we call them—'histrionic' types of *Veronica*. It grows exactly like a clustered upright gentian; has the same kind of leaves at its root, and springs with the same bright vitality among the retiring snows of the Bithynian Olympus. (G. 5.) If, however, the Caucasian flower, C. 1002, be the same, it has lost its perfect grace in luxuriance, growing as large as an asphodel, and with root-leaves half a foot long.

The petals are much veined; and this, of all veronicas, has the lower petal smallest in proportion to the three above—"triplo aut quadruplo minori." (G.)

17. Stagnarum. Marsh-*Veronica*. The last four families we have been examining vary from the typical *Veronicas* not only in their lance-shaped clusters, but in their lengthened, and often every way much enlarged leaves also: and the two which we now will take in association, 17 and 18, carry the change in aspect farthest of any, being both of them true

water-plants, with strong stems and thick leaves. The present name of my *Veronica Stagnarum* is however *V. anagallis*, a mere insult to the little water primula, which one plant of the *Veronica* would make fifty of. This is a rank water-weed, having confused bunches of blossom and seed, like unripe currents, dangling from the leaf-axils. So that where the little triphylla, (No. 7, above,) has only one blossom, daintily set, and well seen, this has a litter of twenty-five or thirty on a long stalk, of which only three or four are well out as flowers, and the rest are mere knobs of bud or seed. The stalk is thick (half an inch round at the bottom), the leaves long and misshapen. "*Frequens in fossis*," D. 203. French, Mouron d'Eau, but I don't know the root or exact meaning of Mouron.

An ugly Australian species, '*labiata*,' C. 1660, has leaves two inches long, of the shape of an aloe's, and partly aloeine in texture, "sawed with unequal, fleshy, pointed teeth."

18. *Fontium*. Brook-*Veronica*. Brook-*Lime*, the Anglo-Saxon '*lime*' from Latin *limus*, meaning the soft mud of streams. German '*Bach-bunge*' (Brook-purse?) ridiculously changed by the botanists into '*Beccabunga*,' for a Latin name! Very beautiful in its crowded green leaves as a stream-companion; rich and bright more than watercress. See notice of it at Matlock, in '*Modern Painters*,' vol. v.

19. *Clara*. *Veronique des rochers*. *Saxatilis*, I suppose, in Sowerby, but am not sure of having identified that with my own favourite, for which I therefore keep the name '*Clara*,' (see above § 9); and the other rock variety, if indeed another, must be remembered, together with it.

20. *Glaucæ*. G. 7. And this at all events, with the *Clara*, is to be remembered as closing the series of twenty families, acknowledged by *Proserpina*. It is a beautiful low-growing ivy-leaved type, with flowers of subdued lilac blue. On Mount Hymettus: no other locality given in the *Flora Græca*.

15. I am sorry, and shall always be so, when the varieties of any flower which I have to commend to the student's memory, exceed ten or twelve in number; but I am content to gratify his pride with lengthier task, if indeed he will resign

himself to the imperative close of the more inclusive catalogue, and be content to know the twelve, or sixteen, or twenty, acknowledged families, thoroughly; and only in their illustration to think of rarer forms. The object of 'Proserpina,' is to make him happily cognizant of the common aspect of Greek and English flowers; under the term 'English,' comprehending the Saxon, Celtic, Norman, and Danish Floras. Of the evergreen shrub alluded to in § 11 above, the *Veronica Decussata* of the Pacific, which is "a bushy evergreen, with beautifully set cross-leaves, and white blossoms scented like *olea fragrans*," I should like him only to read with much surprise, and some incredulity, in Pinkerton's or other entertaining travellers' voyages.

16. And of the families given, he is to note for the common simple characteristic, that they are quatrefoils referred to a more or less elevated position on a central stem, and having, in that relation, the lowermost petal diminished, contrary to the almost universal habit of other flowers to develop in such a position the lower petal chiefly, that it may have its full share of light. You will find nothing but blunder and embarrassment result from any endeavour to enter into further particulars, such as "the relation of the dissepiment with respect to the valves of the capsule," etc., etc., since "in the various species of *Veronica* almost every kind of dehiscence may be observed" (C. under *V. perfoliata*, 1936, an Australian species). Sibthorpe gives the entire definition of *Veronica* with only one epithet added to mine, "*Corolla quadrifida, rotata, laciniâ infimâ angustiore*," but I do not know what 'rotata' here means, as there is no appearance of revolved action in the petals, so far as I can see.

17. Of the mythic or poetic significance of the veronica, there is less to be said than of its natural beauty. I have not been able to discover with what feeling, or at what time, its sacred name was originally given; and the legend of *S. Veronica* herself is, in the substance of it, irrational, and therefore incredible. The meaning of the term 'rational,' as applied to a legend or miracle, is, that there has been an intelligible need for the permission of the miracle at the time when it is re-

corded ; and that the nature and manner of the act itself should be comprehensible in the scope. There was thus quite simple need for Christ to feed the multitudes, and to appear to S. Paul ; but no need, so far as human intelligence can reach, for the reflection of His features upon a piece of linen which could be seen by not one in a million of the disciples to whom He might more easily, at any time, manifest Himself personally and perfectly. Nor, I believe, has the story of S. Veronica ever been asserted to be other than symbolic by the sincere teachers of the Church ; and, even so far as in that merely explanatory function, it became the seal of an extreme sorrow, it is not easy to understand how the pensive fable was associated with a flower so familiar, so bright, and so popularly of good omen, as the Speedwell.

18. Yet, the fact being actually so, and this consecration of the veronica being certainly far more ancient and earnest than the faintly romantic and extremely absurd legend of the forget-me-not ; the Speedwell has assuredly the higher claim to be given and accepted as a token of pure and faithful love, and to be trusted as a sweet sign that the innocence of affection is indeed more frequent, and the appointed destiny of its faith more fortunate, than our inattentive hearts have hitherto discerned.

19. And this the more, because the recognized virtues and uses of the plant are real and manifold : and the ideas of a peculiar honourableness and worth of life connected with it by the German popular name ' Honour-prize ' ; while to the heart of the British race, the same thought is brought home by Shakespeare's adoption of the flower's Welsh name, for the faithfullest common soldier of his ideal king. As a lover's pledge, therefore, it does not merely mean memory ;—for, indeed, why should love be thought of as such at all, if it need to promise not to forget ?—but the blossom is significant also of the lover's best virtues, patience in suffering, purity in thought, gaiety in courage, and serenity in truth : and therefore I make it, worthily, the clasping and central flower of the Cytherides.

CHAPTER IV.

GIULIETTA.

1. SUPPOSING that, in early life, one had the power of living to one's fancy,—and why should we not, if the said fancy were restrained by the knowledge of the two great laws concerning our nature, that happiness is increased, not by the enlargement of the possessions, but of the heart ; and days lengthened, not by the crowding of emotions, but the economy of them ?—if thus taught, we had, I repeat, the ordering of our house and estate in our own hands, I believe no manner of temperance in pleasure would be better rewarded than that of making our gardens gay only with common flowers ; and leaving those which needed care for their transplanted life to be found in their native places when we travelled. So long as I had crocus and daisy in the spring, roses in the summer, and hollyhocks and pinks in the autumn, I used to be myself independent of farther horticulture,—and it is only now that I am old, and since pleasant travelling has become impossible to me, that I am thankful to have the white narcissus in my borders, instead of waiting to walk through the fragrance of the meadows of Clarens ; and pleased to see the milkwort blue on my scythe-mown banks, since I cannot gather it any more on the rocks of the Vosges, or in the divine glens of Jura.

2. Among the losses, all the more fatal in being unfelt, brought upon us by the fury and vulgarity of modern life, I count for one of the saddest, the loss of the wish to gather a flower in travelling. The other day,—whether indeed a sign of some dawning of doubt and remorse in the public mind, as to the perfect jubilee of railroad journey, or merely a piece of the common daily flattery on which the power of the British press first depends, I cannot judge ;—but, for one or other of such motives, I saw lately in some illustrated paper, a pictorial comparison of old-fashioned and modern travel, representing, as the type of things passed away, the outside passengers of

the mail shrinking into huddled and silent distress from the swirl of a winter snowstorm ; and for type of the present Elysian dispensation, the inside of a first-class saloon carriage, with a beautiful young lady in the last pattern of Parisian travelling dress, conversing, Daily news in hand, with a young officer—her fortunate vis-à-vis—on the subject of our military successes in Afghanistan and Zululand.*

3. I will not, in presenting—it must not be called, the other side, but the supplementary, and wilfully omitted, facts, of this ideal,—oppose, as I fairly might, the discomforts of a modern cheap excursion train, to the chariot-and-four, with outriders and courier, of ancient noblesse. I will compare only the actual facts, in the former and in latter years, of my own journey from Paris to Geneva. As matters are now arranged, I find myself, at half-past eight in the evening, waiting in a confused crowd with which I am presently to contend for a seat, in the dim light and cigar-stench of the great station of the Lyons line. Making slow way through the hostilities of the platform, in partly real, partly weak politeness, as may be, I find the corner seats of course already full of prohibitory cloaks and umbrellas ; but manage to get a middle back one ; the net overhead is already surcharged with a bulging extra portmanteau, so that I squeeze my desk as well as I can between my legs, and arrange what wraps I have about my knees and shoulders. Follow a couple of hours of simple patience, with nothing to entertain one's thoughts but the steady roar of the line under the wheels, the blinking and dripping of the oil lantern, and the more or less ungainly wretchedness, and variously sullen compromises and encroachments of posture, among the five other passengers preparing themselves for sleep : the last arrangement for the night being to shut up both windows, in order to effect, with our six breaths, a salutary modification of the night air.

4. The banging and bumping of the carriages over the turntables wakes me up as I am beginning to doze, at Fontainebleau, and again at Sens ; and the trilling and thrilling of the

* See letter on the last results of our African campaigns, in the *Morning Post* of April 14th, of this year.

little telegraph bell establishes itself in my ears, and stays there, trilling me at last into a shivering, suspicious sort of sleep, which, with a few vaguely fretful shrugs and fidgets, carries me as far as Tonnerre, where the 'quinze minutes d'arret' revolutionize everything; and I get a turn or two on the platform, and perhaps a glimpse of the stars, with promise of a clear morning; and so generally keep awake past Mont Bard, remembering the happy walks one used to have on the terrace under Buffon's tower, and thence watching, if perchance, from the mouth of the high tunnel, any film of moonlight may show the far undulating masses of the hills of Citeaux. But most likely one knows the place where the great old view used to be only by the sensible quickening of the pace as the train turns down the incline, and crashes through the trenched cliffs into the confusion and high clattering vault of the station at Dijon.

5. And as my journey is almost always in the spring-time, the twisted spire of the cathedral usually shows itself against the first grey of dawn, as we run out again southwards; and resolving to watch the sunrise, I fall more complacently asleep,—and the sun is really up by the time one has to change carriages, and get morning coffee at Macon. And from Ambérieux, through the Jura valley, one is more or less feverishly happy and thankful, not so much for being in sight of Mont Blanc again, as in having got through the nasty and gloomy night journey; and then the sight of the Rhone and the Salève seems only like a dream, presently to end in nothingness; till, covered with dust, and feeling as if one never should be fit for anything any more, one staggers down the hill to the Hotel des Bergues, and sees the dirtied Rhone, with its new iron bridge, and the smoke of a new factory exactly dividing the line of the aiguilles of Chamouni.

6. That is the journey as it is now,—and as, for me, it must be; except on foot, since there is now no other way of making it. But this *was* the way we used to manage it in old days:—

Very early in Continental transits we had found out that the family travelling carriage, taking much time and ingenuity to load, needing at the least three, usually four—horses, and

on Alpine passes six, not only jolted and lagged painfully on bad roads, but was liable in every way to more awkward discomforts than lighter vehicles; getting itself jammed in archways, wrenched with damage out of ruts, and involved in volleys of justifiable reprobation among market stalls. So when we knew better, my father and mother always had their own old-fashioned light two-horse carriage to themselves, and I had one made with any quantity of front and side pockets for books and picked up stones; and hung very low, with a fixed side-step, which I could get off or on with the horses at the trot; and at any rise or fall of the road, relieve them, and get my own walk, without troubling the driver to think of me.

7. Thus, leaving Paris in the bright spring morning, when the Seine glittered gaily at Charenton, and the arbres de Judée were mere pyramids of purple bloom round Villeneuve-St.-Georges, one had an afternoon walk among the rocks of Fontainebleau, and next day we got early into Sens, for new lessons in its cathedral aisles, and the first saunter among the budding vines of the coteaux. I finished my plate of the Tower of Giotto, for the 'Seven Lamps,' in the old inn at Sens, which Dickens has described in his wholly matchless way in the last chapter of 'Mrs. Lirriper's Lodgings.' The next day brought us to the oolite limestones at Mont Bard, and we always spent the Sunday at the Bell in Dijon. Monday, the drive of drives, through the village of Genlis, the fortress of Auxonne, and up the hill to the vine-surrounded town of Dole; whence, behold at last the limitless ranges of Jura, south and north, beyond the woody plain, and above them the 'Derniers Rochers' and the white square-set summit, worshipped ever anew. Then at Poligny, the same afternoon, we gathered the first milkwort for that year; and on Tuesday, at St. Laurent, the wild lily of the valley; and on Wednesday, at Morez, gentians.

And on Thursday, the *eighth or ninth* day from Paris, days all spent patiently and well, one saw from the gained height of Jura, the great Alps unfold themselves in their chains and wreaths of incredible crest and cloud.

8. Unhappily, during all the earliest and usefulest years of

such travelling, I had no thought of ever taking up botany as a study; feeling well that even geology, which was antecedent to painting with me, could not be followed out in connection with art but under strict limits, and with sore shortcomings. It has only been the later discovery of the uselessness of old scientific botany, and the abominableness of new, as an element of education for youth;—and my certainty that a true knowledge of their native Flora was meant by Heaven to be one of the first heart-possessiones of every happy boy and girl in flower-bearing lands, that have compelled me to gather into system my fading memories, and wandering thoughts. And of course in the diaries written at places of which I now want chiefly the details of the Flora, I find none; and in this instance of the milkwort, whose name I was first told by the Chamouni guide, Joseph Couttet, then walking with me on the unperilous turf of the first rise of the Vosges, west of Strasburg, and rebuking me indignantly for my complaint that, being then thirty-seven years old, and not yet able to draw the great plain and distant spire, it was of no use trying in the poor remainder of life to do anything serious,—then, and there, I say, for the first time examining the strange little flower, and always associating it, since, with the limestone crags of Alsace and Burgundy,* I don't find a single note of its preferences or antipathies in other districts, and cannot say a word about the soil it chooses, or the height it ventures, or the familiarities to which it condescends, on the Alps or Apennines.

9. But one thing I have ascertained of it, lately at Brantwood, that it is capricious and fastidious beyond any other little blossom I know of. In laying out the rock garden, most of the terrace sides were trusted to remnants of the natural slope, propped by fragments of stone, among which nearly every other wild flower that likes sun and air, is glad sometimes to root itself. But at the top of all, one terrace was brought to mathematically true level of surface, and slope of

* I deliberately, not garrulously, allow more autobiography in 'Proserpina' than is becoming, because I know not how far I may be permitted to carry on that which was begun in 'Fors.'

side, and turfed with delicately chosen and adjusted sods, meant to be kept duly trim by the scythe. And *only* on this terrace does the Giulietta choose to show herself,—and even there, not in any consistent places, but gleaming out here in one year, there in another, like little bits of unexpected sky through cloud; and entirely refusing to allow either bank or terrace to be mown the least trim during *her* time of disport there. So spared and indulged, there are no more wayward things in all the woods or wilds; no more delicate and perfect things to be brought up by watch through day and night, than her recumbent clusters, trickling, sometimes almost gushing through the grass, and meeting in tiny pools of flawless blue.

10. I will not attempt at present to arrange the varieties of the Giulietta, for I find that all the larger and presumably characteristic forms belong to the Cape; and only since Mr. Froude came back from his African explorings have I been able to get any clear idea of the brilliancy and associated infinitude of the Cape flowers. If I could but write down the substance of what he has told me, in the course of a chat or two, which have been among the best privileges of my recent stay in London, (prolonged as it has been by recurrence of illness,) it would be a better summary of what should be generally known in the natural history of southern plants than I could glean from fifty volumes of horticultural botany. In the meantime, everything being again thrown out of gear by the aforesaid illness, I must let this piece of 'Proserpina' break off, as most of my work does—and as perhaps all of it may soon do—leaving only suggestion for the happier research of the students who trust me thus far.

11. Some essential points respecting the flower I shall note, however, before ending. There is one large and frequent species of it of which the flowers are delicately yellow, touched with tawny red forming one of the chief elements of wild foreground vegetation in the healthy districts of hard Alpine limestone.* This is, I believe, the only European type of the large

* In present Botany, *Polygala Chamæbuxus*; C. 316: or, in English, Much Milk Ground-box. It is not, as matters usually go, a name to be

Cape varieties, in all of which, judging from such plates as have been accessible to me, the crests or fringes of the lower petal are less conspicuous than in the smaller species; and the flower almost takes the aspect of a broom-blossom or pease-blossom. In the smaller European varieties, the white fringes of the lower petal are the most important and characteristic part of the flower, and they are, among European wild flowers, absolutely without any likeness of associated structure. The fringes or crests which, towards the origin of petals, so often give a frosted or gemmed appearance to the centres of flowers, are here thrown to the extremity of the petal, and suggest an almost coralline structure of blossom, which in no other instance whatever has been imitated, still less carried out into its conceivable varieties of form. How many such varieties might have been produced if these fringes of the *Giulietta*, or those already alluded to of *Lucia nivea*, had been repeated and enlarged; as the type, once adopted for complex bloom in the thistle-head, is multiplied in the innumerable gradations of thistle, teasel, hawkweed, and aster! We might have had flowers edged with lace finer than was ever woven by mortal fingers, or tasselled and braided with fretwork of silver, never tarnished—or hoarfrost that grew brighter in the sun. But it was not to be, and after a few hints of what might be done in this kind, the Fate, or Folly, or, on recent theories, the extreme fitness—and consequent survival, of the Thistles and Dandelions, entirely drives the fringed *Lucias* and blue-flushing milkworts out of common human neighbourhood, to live recluse lives with the memories of the abbots of Cluny, and pastors of Piedmont.

12. I have called the *Giulietta* 'blue-flushing' because it is

ill thought of, as it really contains three ideas; and the plant does, without doubt, somewhat resemble box, and grows on the ground;—far more fitly called 'ground-box' than the *Veronica* 'ground-oak.' I want to find a pretty name for it in connection with Savoy or Dauphiné, where it indicates, as above stated, the *healthy* districts of *hard* limestone. I do not remember it as ever occurring among the dark and moist shales of the inner mountain ranges, which at once confine and pollute the air.

one of the group of exquisite flowers which at the time of their own blossoming, breathe their colour into the surrounding leaves and supporting stem. Very notably the Grape hyacinth and Jura hyacinth, and some of the Vestals, empurpling all their green leaves even to the ground: a quite distinct nature in the flower, observe, this possession of a power to kindle the leaf and stem with its own passion, from that of the heaths, roses, or lilies, where the determined bracts or calices assert themselves in opposition to the blossom, as little pine-leaves, or mosses, or brown-paper packages, and the like.

13. The *Giulietta*, however, is again entirely separate from the other leaf-flushing blossoms, in that, after the two green leaves next the flower have glowed with its blue, while it lived, they do not fade or waste with it, but return to their own former green simplicity, and close over it to protect the seed. I only know this to be the case with the *Giulietta Regina*; but suppose it to be (with variety of course in the colours) a condition in other species,—though of course nothing is ever said of it in the botanical accounts of them. I gather, however, from Curtis's careful drawings that the prevailing colour of the Cape species is purple, thus justifying still further my placing them among the *Cytherides*; and I am content to take the descriptive epithets at present given them, for the following five of this southern group, hoping that they may be explained for me afterwards by helpful friends.

- | | |
|-----|--------------------------------|
| 14. | <i>Bracteolata</i> , C. 345. |
| | <i>Oppositifolia</i> , C. 492. |
| | <i>Speciosa</i> , C. 1790. |

These three all purple, and scarcely distinguishable from sweet pease-blossom, only smaller.

Stipulacea, C. 1715. Small, and very beautiful, lilac and purple, with a leaf and mode of growth like rosemary. The "Foxtail" milkwort, whose name I don't accept, C. 1006, is intermediate between this and the next species.

15. *Mixta*, C. 1714. I don't see what mingling is meant, except that it is just like *Erica tetralix* in the leaf, only, apparently, having little four-petalled pinks for blossoms. This

appearance is thus botanically explained. I do not myself understand the description, but copy it, thinking it may be of use to somebody. "The apex of the carina is expanded into a two-lobed plain petal, the lobes of which are emarginate. This appendix is of a bright rose colour, and forms the principal part of the flower." The describer relaxes, or relapses, into common language so far as to add that 'this appendix' "dispersed among the green foliage in every part of the shrub, gives it a pretty lively appearance."

Perhaps this may also be worth extracting.

"Carina, deeply channelled, of a saturated purple within, sides folded together, so as to include and firmly embrace the style and stamens, which, when arrived at maturity, upon being moved, escape elastically from their confinement, and strike against the two erect petals or alæ—by which the pollen is dispersed.

"Stem shrubby, with long flexile branches." (Length or height not told. I imagine like an ordinary heath's.)

The term 'carina,' occurring twice in the above description, is peculiar to the structure of the pease and milkworts; we will examine it afterwards. The European varieties of the milkwort, except the chamæbuxus, are all minute,—and, their ordinary epithets being at least inoffensive, I give them for reference till we find prettier ones; altering only the Calcareæ, because we could not have a 'Chalk Juliet,' and two varieties of the Regina, changed for reason good—her name, according to the last modern refinements of grace and ease in pronunciation, being *Eu-vulgaris*, var. *genuina*! My readers may more happily remember her and her sister as follows:—

16. (i.) *Giulietta Regina*. Pure Blue. The same in colour, form, and size throughout Europe.
- (ii.) *Giulietta Soror-Reginæ*. Pale, reddish-blue or white in the flower, and smaller in the leaf, otherwise like the Regina.
- (iii.) *Giulietta Depressa*. The smallest of those I can find drawings of. Flowers, blue; lilac in the fringe, and no bigger than pins' heads; the leaves quite gem-like in minuteness and order.

(iv.) *Giulietta Cisterciana*. Its present name 'Calcareæ,' is meant, in botanic Latin, to express its growth on limestone or chalk mountains. But we might as well call the South Down sheep, Calcareous mutton. My epithet will rightly associate it with the Burgundian hills round Cluny and Citeaux. Its ground leaves are much larger than those of the *Depressa*; the flower a little larger, but very pale.

(v.) *Giulietta Austriaca*. Pink, and very lovely, with bold cluster of ground leaves, but itself minute—almost dwarf. Called 'small bitter milkwort' by S. How far distinct from the next following one, Norwegian, is not told.

The above five kinds are given by Sowerby as British, but I have never found the *Austriaca* myself.

(vi.) *Giulietta Amara*. Norwegian. Very quaint in blossom outline, like a little blue rabbit with long ears. D. 1169.

17. Nobody tells me why either this last or No. 5 have been called bitter; and Gerarde's five kinds are distinguished only by colour—blue, red, white, purple, and "the dark, of an overworn ill-favoured colour, which maketh it to differ from all others of his kind." I find no account of this ill-favoured one elsewhere. The white is my *Soror Reginæ*; the red must be the *Austriaca*; but the purple and overworn ones are perhaps now overworn indeed. All of them must have been more common in Gerarde's time than now, for he goes on to say "*Milkwoort* is called *Ambarualis flos*, so called because it doth specially flourish in the Crosse or Gang-weeke, or Rogation-weeke, of which flowers, the maidens which use in the countries to walk the procession do make themselves garlands and nose-gaies, in English we may call it Crosse flower, Gang flower, Rogation flower, and Milk-woort."

18. Above, at page 151, vol. i., in first arranging the *Cytherides*, I too hastily concluded that the ascription to this plant of helpfulness to nursing mothers was 'more than ordi-

narily false'; thinking that its rarity could never have allowed it to be fairly tried. If indeed true, or in any degree true, the flower has the best right of all to be classed with the Cytherides, and we might have as much of it for beauty and for service as we chose, if we only took half the pains to garnish our summer gardens with living and life-giving blossom, that we do to garnish our winter gluttonies with dying and useless ones.

19. I have said nothing of root, or fruit, or seed, having never had the hardness of heart to pull up a milkwort cluster—nor the chance of watching one in seed:—The pretty thing vanishes as it comes, like the blue sky of April, and leaves no sign of itself—that I ever found. The botanists tell me that its fruit “dehiscens loculicidally,” which I suppose is botanic for “splits like boxes,” (but boxes shouldn't split, and didn't, as we used to make and handle them before railways). Out of the split boxes fall seeds—too few; and, as aforesaid, the plant never seems to grow again in the same spot. I should thankfully receive any notes from friends happy enough to live near milkwort banks, on the manner of its nativity.

20. Meanwhile, the Thistle, and the Nettle, and the Dock, and the Dandelion are cared for in their generations by the finest arts of—Providence, shall we say? or of the spirits appointed to punish our own want of Providence? May I ask the reader to look back to the seventh chapter of the first volume, for it contains suggestions of thoughts which came to me at a time of very earnest and faithful inquiry, set down, I now see too shortly, under the press of reading they involved, but intelligible enough if they are read as slowly as they were written, and especially note the paragraph of summary of p. 86 on the power of the Earth Mother, as Mother, and as *Judge*; watching and rewarding the conditions which induce adversity and prosperity in the kingdoms of men: comparing with it carefully the close of the fourth chapter, p. 63,* which contains, for the now recklessly multiplying classes

* Which, with the following page, is the summary of many chapters of ‘Modern Painters:’ and of the aims kept in view throughout ‘Mu-



PLATE XI.—STATES OF ADVERSITY.

of artists and colonists; truths essential to their skill, and inexorable upon their labour.

21. The pen-drawing facsimiled by Mr. Allen with more than his usual care in the frontispiece to this number of 'Proserpina,' was one of many executed during the investigation of the schools of Gothic (German, and later French), which founded their minor ornamentation on the serration of the thistle leaf, as the Greeks on that of the Acanthus, but with a consequent, and often morbid, love of thorny points, and insistence upon jagged or knotted intricacies of stubborn vegetation, which is connected in a deeply mysterious way with the gloomier forms of Catholic asceticism.*

22. But also, in beginning 'Proserpina,' I intended to give many illustrations of the light and shade of foreground leaves belonging to the nobler groups of thistles, because I thought they had been neglected by ordinary botanical draughtsmen; not knowing at that time either the original drawings at Oxford for the 'Flora Græca,' or the nobly engraved plates executed in the close of the last century for the 'Flora Danica' and 'Flora Londinensis.' The latter is in the most difficult portraiture of the larger plants, even the more wonderful of the two; and had I seen the miracles of skill, patience, and faithful study which are collected in the first and second volumes, published in 1777 and 1798, I believe my own work would never have been undertaken.† Such as it is, however, I may still, health being granted me, persevere in it; for my own leaf and branch studies express conditions of shade which even these most ex-

nera Pulveris.' The three kinds of Desert specified—of Reed, Sand, and Rock—should be kept in mind as exhaustively including the states of the earth neglected by man. For instance of a Reed desert, produced *merely* by his neglect, see Sir Samuel Baker's account of the choking up of the bed of the White Nile. Of the sand desert, Sir F. Palgrave's journey from the Djowf to Häyel, vol. i, p. 92.

* This subject is first entered on in the 'Seven Lamps,' and carried forward in the final chapters of 'Modern Painters,' to the point where I hope to take it up for conclusion, in the sections of 'Our Fathers have told us' devoted to the history of the fourteenth century.

† See in the first volume, the plates of *Sonchus Arvensis* and *Tussilago Petasites*; in the second, *Carduus tomentosus* and *Pieris Echioides*.

quisite botanical plates ignore; and exemplify uses of the pen and pencil which cannot be learned from the inimitable fineness of line engraving. The frontispiece to this number, for instance, (a seeding head of the commonest field-thistle of our London suburbs,) copied with a steel pen on smooth grey paper, and the drawing softly touched with white on the nearer thorns, may well surpass the effect of the plate.

23. In the following number of 'Proserpina' I have been tempted to follow, with more minute notice than usual, the 'conditions of adversity' which, as they fret the thistle tribe into jagged malice, have humbled the beauty of the great domestic group of the Vestals into confused likenesses of the Dragonweed and Nettle: but I feel every hour more and more the necessity of separating the treatment of subjects in 'Proserpina' from the microscopic curiosities of recent botanic illustration, nor shall this work close, if my strength hold, without fulfilling in some sort, the effort begun long ago in 'Modern Painters,' to interpret the grace of the larger blossoming trees, and the mysteries of leafy form which clothe the Swiss precipice with gentleness, and colour with softest azure the rich horizons of England and Italy.

INDEX I.

DESCRIPTIVE NOMENCLATURE.

PLANTS in perfect form are said, at page 22, to consist of four principal parts: root, stem, leaf, and flower. (Compare Chapter V., § 2.) The reader may have been surprised at the omission of the fruit from this list. But a plant which has borne fruit is no longer of 'perfect' form. Its flower is dead. And, observe, it is further said, at page 49, (and compare Chapter III., § 2,) that the use of the fruit is to produce the flower: not of the flower to produce the fruit. Therefore, the plant in perfect blossom, is itself perfect. Nevertheless, the formation of the fruit, practically, is included in the flower, and so spoken of in the fifteenth line of the same page.

Each of these four main parts of a plant consist normally of a certain series of minor parts, to which it is well to attach easily remembered names. In this section of my index I will not admit the confusion of idea involved by alphabetical arrangement of these names, but will sacrifice facility of reference to clearness of explanation, and taking the four great parts of the plant in succession, I will give the list of the minor and constituent parts, with their names as determined in *Proserpina*, and reference to the pages where the reasons for such determination are given, endeavouring to supply, at the same time, any deficiencies which I find in the body of the text.

I. THE ROOT.

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Origin of the word Root.....	23
The offices of the root are threefold: namely, Tenure, Nourishment, and Animation	23-28
The essential parts of a Root are two: the Limbs and Fibres.....	27
I. THE LIMB is the gathered mass of fibres, or at least of fibrous substance, which extends itself in search of nourishment ...	
26	
II. THE FIBRE is the organ by which the nourishment is received	
7	
The inessential or accidental parts of roots, which are attached to the roots of some plants, but not to those of others, (and are, indeed, for the most part absent,) are three: namely, Store-Houses, Refuges, and Ruins.	
7	
III. STORE-HOUSES contain the food of the future plant	
7	
IV. REFUGES shelter the future plant itself for a time	
8	
V. RUINS form a basis for the growth of the future plant in its proper order.....	
9	
Root-Stocks, the accumulation of such ruins in a vital order	
9	
General questions relating to the office and chemical power of roots	
3	1

The nomenclature of Roots will not be extended, in Proserpina, beyond the five simple terms here given: though the ordinary botanical ones—corn, bulb, tuber, etc.—will be severally explained in connection with the plants which they specially characterize.

II. THE STEM.

Derivation of word.....	6
The channel of communication between leaf and root	10
In a perfect plant it consists of three parts:	
I. THE STEM (STEMMA) proper.—A growing or advancing shoot which sustains all the other organs of the plant.....	
It may grow by adding thickness to its sides without advancing; but its essential characteristic is the vital power of Advance.	

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It may be round, square, or polygonal, but is always roundly minded.....	96
Its structural power is Spiral	96
It is essentially branched ; having subordinate leaf-stalks and flower-stalks, if not larger branches	98
It develops the buds, leaves, and flowers of the plant.	
This power is not yet properly defined, or explained ; and referred to only incidentally throughout the eighth chapter.....	94-97
II. THE LEAF-STALK (CYMBA) sustains, and expands itself into, the Leaf.....	
	94, 95
It is essentially furrowed above, and convex below.....	95
It is to be called in Latin, the Cymba ; in English, the Leaf-Stalk	95
III. THE FLOWER-STALK (PETIOLUS):	
It is essentially round	92
It is usually separated distinctly at its termination from the flower.....	92, 93
It is to be called in Latin, Petiolus ; in English, Flower-stalk	
These three are the essential parts of a stem. But besides these, it has, when largely developed, a permanent form : namely,	
IV. THE TRUNK.—A non-advancing mass of collected stem, arrested at a given height from the ground.....	98
The stems of annual plants are either leafy, as of a thistle, or bare, sustaining the flower or flower-cluster at a certain height above the ground. Receiving therefore these following names:—	
V. THE VIRGA.—The leafy stem of an annual plant, not a grass, yet growing upright.....	104
VI. THE VIRGULA.—The leafless flower-stem of an annual plant, not a grass, as of a primrose or dandelion.....	104

VII. THE FILUM.—The running stem of a creeping plant.

It is not specified in the text for use ; but will be necessary ; so also, perhaps, the *Stelechos*, or stalk proper (26, p. 104) the branched stem of an annual plant, not a grass ; one cannot well talk of the *Virga* of hemlock. The '*Stolon*' is explained in its classical sense at page 100. but I believe botanists use it otherwise. I shall have occasion to refer to, and complete its explanation, in speaking of bulbous plants.

VIII. THE CAUDEX.—The essentially ligneous and compact part of a stem..... 10

This equivocal word is not specified for use in the text, but I mean to keep it for the accumulated stems of inlaid plants, palms, and the like ; for which otherwise we have no separate term.

IX. THE AVENA.—Not specified in the text at all ; but it will be prettier than '*baculus*,' which is that I had proposed, for the '*staff*' of grasses. See page 113.

These ten names are all that the student need remember ; but he will find some interesting particulars respecting the following three, noticed in the text :—

STIPS.—The origin of stipend, stupid, and stump..... 1

STIPULA.—The subtlest Latin term for straw..... 1

CAULIS (Kale).—The peculiar stem of branched eatable vegetables 1

CANNA.—Not noticed in the text ; but likely to be sometimes useful for the stronger stems of grasses.

III. THE LEAF.

Derivation of word..... 3

The Latin form '*folium*'..... 3

The Greek form '*petalos*'..... 3

Veins and ribs of leaves, to be usually summed under the term '*rib*' 34

Chemistry of leaves..... 36

The nomenclature of the leaf consists, in botanical books, of little more than barbarous, and, for the general reader, totally useless attempts to describe their forms in Latin. But

their forms are infinite and indescribable except by the pencil. I will give central types of form in the next volume of *Proserpina*; which, so that the reader sees and remembers, he may *call* anything he likes. But it is necessary that names should be assigned to certain classes of leaves which are essentially different from each other in character and tissue, not merely in form. Of these the two main divisions have been already given: but I will now add the less important ones which yet require distinct names.

- I. APOLLINE.—Typically represented by the laurel. 39
 II. ARETHUSAN.—Represented by the alisma. 40

It ought to have been noticed that the character of serration, within reserved limits, is essential to an Apolline leaf, and absolutely refused by an Arethusan one.

- III. DRYAD.—Of the ordinary leaf tissue, neither manifestly strong, nor admirably tender, but serviceably consistent, which we find generally to be the substance of the leaves of forest trees. Typically represented by those of the oak.
 IV. ABIETINE.—Shaft or sword-shape, as the leaves of firs and pines.
 V. CRESSIC.—Delicate and light, with smooth tissue, as the leaves of cresses, and clover.
 VI. SALVIAN.—Soft and woolly, like miniature blankets, easily folded, as the leaves of sage.
 VII. CAULINE.—Softly succulent, with thick central ribs, as of the cabbage.
 VIII. ALOEINE.—Inflexibly succulent, as of the aloe or houseleek.

No rigid application of these terms must ever be attempted; but they direct the attention to important general conditions, and will often be found to save time and trouble in description.

IV. THE FLOWER.

- Its general nature and function 49
 Consists essentially of Corolla and Treasury 58
 Has in perfect form the following parts:—

- I. THE TORUS.—Not yet enough described in the text. It is the expansion of the extremity of the flower-stalk, in preparation for the support of the expanding flower. 50-154

	PAGE
II. THE INVOLUCRUM.—Any kind of wrapping or propping condition of leafage at the base of a flower may properly come under this head ; but the manner of prop or protection differs in different kinds, and I will not at present give generic names to these peculiar forms.	
III. THE CALYX (The Hiding-place).—The outer whorl of leaves, under the protection of which the real flower is brought to maturity. Its separate leaves are called SEPALS.....	59
IV. THE COROLLA (The Cup).—The inner whorl of leaves, forming the flower itself. Its separate leaves are called PETALS..	53
V. THE TREASURY.—The part of the flower that contains its seeds.	
VI. THE PILLAR.—The part of the flower above its treasury, by which the power of the pollen is carried down to the seeds..	58
It consists usually of two parts—the SHAFT and VOLUTE..	58
When the pillar is composed of two or more shafts, attached to separate treasury-cells, each cell with its shaft is called a CARPEL	162
VII. THE STAMENS.—The parts of the flower which secrete its pollen	58
They consist usually of two parts, the FILAMENT and ANTHER, not yet described.	
VIII. THE NECTARY.—The part of the flower containing its honey, or any other special product of its inflorescence. The name has often been given to certain forms of petals of which the use is not yet known. No notice has yet been taken of this part of the flower in Proserpina.	
These being all the essential parts of the flower itself, other forms and substances are developed in the seed as it ripens, which, I believe, may most conveniently be arranged in a separate section, though not logically to be considered as separable from the flower, but only as mature states of certain parts of it.	

V. THE SEED.

I must once more desire the reader to take notice that, under the four sections already defined, the morphology of the plant is to be considered as complete, and that we are now only to examine and name, farther, its *product*; and that not so much as the germ of its own future descendant flower, but as a separate substance which it is appointed to form, partly to its own detriment, for the sake of higher creatures. This product consists essentially of two parts: the Seed and its Husk.

	PAGE
I. THE SEED.—Defined.....	152
It consists, in its perfect form, of three parts	153
These three parts are not yet determinately named in the text: but I give now the names which will be usually attached to them.	
A. <i>The Sacque</i> .—The Outside skin of a seed,	152
B. <i>The Nutrine</i> .—A word which I coin, for general applicability, whether to the farina of corn, the substance of a nut, or the parts that become the first leaves in a bean	152
C. <i>The Germ</i> .—The origin of the root ...	152
II. THE HUSK.—Defined.....	153
Consists, like the seed when in perfect form, of three parts.	
A. <i>The Skin</i> .—The outer envelope of all the seed structures ..	153
B. <i>The Rind</i> .—The central body of the Husk	153-162
C. <i>The Shell</i> .—Not always shelly, yet best described by this general term; and becoming a shell, so called, in nuts, peaches, dates, and other such kernel-fruits	153

The products of the Seed and Husk of Plants, for the use of animals, are practically to be massed under the three heads of BREAD, OIL, and FRUIT. But the substance of which bread is made is more accurately described as Farina; and the

pleasantness of fruit to the taste depends on two elements in its substance: the juice, and the pulp containing it, which may properly be called Nectar and Ambrosia. We have therefore in all four essential products of the Seed and Husk—

A. Farina.	Flour	156	6
B. Oleum.	Oil	158	8
C. Nectar.	Fruit-juice	158	8
D. Ambrosia.	Fruit-substance	158	8

Besides these all-important products of the seed, others are formed in the stems and leaves of plants, of which no account hitherto has been given in Proserpina. I delay any extended description of these until we have examined the structure of wood itself more closely; this intricate and difficult task having been remitted (p. 122) to the days of coming spring; and I am well pleased that my younger readers should at first be vexed with no more names to be learned than those of the vegetable productions with which they are most pleasantly acquainted: but for older ones, I think it well, before closing the present volume, to indicate, with warning, some of the obscurities, and probable fallacies, with which this vanity of science encumbers the chemistry, no less than the morphology, of plants.

Looking back to one of the first books in which our new knowledge of organic chemistry began to be displayed, thirty years ago, I find that even at that period the organic elements which the cuisine of the laboratory had already detected in simple Indigo, were the following:—

Isatine,	Chlorindine,
Bromisatine,	Chlorindoptene,
Bibromisatine;	Chlorindatmit;
Chlorisatine,	Chloranile,
Bichlorisatine;	Chloranilam, and,
Chlorisatyde,	Chloranilammon.
Bichlorisatyde;	

And yet, with all this practical skill in decoction, and accumulative industry in observation and nomenclature, so far are our scientific men from arriving, by any decoctive process of their own knowledge, at general results useful to ordinary human creatures, that when I wish now to separate, for young scholars, in first massive arrangement of vegetable productions, the Substances of Plants from their Essences; that is to say, the weighable and measurable body of the plant from its practically immeasurable, if not imponderable, spirit, I find in my three volumes of close-printed chemistry, no information whatever respecting the quality of volatility in matter, except this one sentence:—

“The disposition of various substances to yield vapour is very different: and the difference depends doubtless on the relative power of cohesion with which they are endowed.”*

Even in this not extremely pregnant, though extremely cautious, sentence, two conditions of matter are confused, no notice being taken of the difference in manner of dissolution between a vitally fragrant and a mortally putrid substance.

It is still more curious that when I look for more definite instruction on such points to the higher ranks of botanists, I find in the index to Dr. Lindley's ‘Introduction to Botany’—seven hundred pages of close print—not one of the four words ‘Volatile,’ ‘Essence,’ ‘Scent,’ or ‘Perfume.’ I examine the index to Gray's ‘Structural and Systematic Botany,’ with precisely the same success. I next consult Professors Balfour and Grindon, and am met by the same dignified silence. Finally, I think over the possible chances in French, and try in Figuier's indices to the ‘Histoire des Plantes’ for ‘Odeur’—no such word! ‘Parfum’—no such word. ‘Essence’—no such word. ‘Encens’—no such word. I try at last ‘Pois de Senteur,’ at a venture, and am referred to a page which describes their going to sleep.

Left thus to my own resources, I must be content for the present to bring the subject at least under safe laws of nomenclature. It is possible that modern chemistry may be entirely

* “Elements of Chemistry,” p. 44. By Edward Turner; edited by Justus Liebig and William Gregory. Taylor and Walton, 1840.

There are also a certain number of vegetable materials more or less prepared, secreted, or digested for us by animals, such as wax, honey, silk, and cochineal. The properties of these require more complex definitions, but they have all very intelligible and well-established names. 'Tea' must be a general term for an extract of any plant in boiling water: though when standing alone the word will take its accepted Chinese meaning: and essence, the general term for the condensed dew of a vegetable vapour, which is with grace and fitness called the 'being' of a plant, because its properties are almost always characteristic of the species; and it is not, like leaf tissue or wood fibre, approximately the same material in different shapes; but a separate element in each family of flowers, of a mysterious, delightful, or dangerous influence, logically inexplicable, chemically inconstructible, and wholly, in dignity of nature, above all modes and faculties of form.

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ARIADNE FLORENTINA

SIX LECTURES

ON

WOOD AND METAL ENGRAVING

WITH APPENDIX

GIVEN BEFORE THE UNIVERSITY OF OXFORD IN MICHAELMAS
TERM, 1872

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myself. In all this, there is much to be mended, but, in true light, nothing to be regretted.

I say, I had to write my school grammar. These three volumes of lectures under my hand,* contain carefully set down, the things I want you first to know. None of my writings are done fluently; the second volume of *Modern Painters* was all of it written twice—most of it, four times,—over; and these lectures have been written, I don't know how many times. You may think that this was done merely in an author's vanity, not in a tutor's care. To the vanity I plead guilty,—no man is more intensely vain than I am; but my vanity is set on having it *known* of me that I am a good master, not in having it *said* of me that I am a smooth author. My vanity is never more wounded than in being called a fine writer, meaning—that nobody need mind what I say.

3. Well, then, besides this vanity, I have some solicitude for your progress. You may give me credit for it or not, as you choose, but it is sincere. And that your advance may be safe, I have taken the best pains I could in laying down laws for it. In these three years I have got my grammar written, and, with the help of many friends, all working instruments in good order; and now we will try what we can do. Not that, even now, you are to depend on my presence with you in personal teaching. I shall henceforward think of the lectures less, of the schools more; but my best work for the schools will often be by drawing in Florence or in Lancashire—not here.

4. I have already told you several times that the course through which I mean every student in these schools should pass, is one which shall enable them to understand the elementary principles of the finest art. It will necessarily be severe, and seem to lead to no immediate result. Some of you will, on the contrary, wish to be taught what is immediately easy, and gives prospect of a manifest success.

But suppose they should come to the Professor of Logic and Rhetoric, and tell him they wanted to be taught to preach like Mr. Spurgeon, or the Bishop of —.

* Inaugural series, *Aratra Pentelici*, and *Eagle's Nest*.

He would say to them,—I cannot, and if I could I would not, tell you how to preach like Mr. Spurgeon, or the Bishop of ——. Your own character will form your style ; your own zeal will direct it ; your own obstinacy or ignorance may limit or exaggerate it ; but my business is to prevent, as far as I can, your having *any* particular style ; and to teach you the laws of all language, and the essential power of your own.

In like manner, this course, which I propose to you in art, will be calculated only to give you judgment and method in future study, to establish to your conviction the laws of general art, and to enable you to draw, if not with genius, at least with sense and propriety.

The course, so far as it consists in practice, will be defined in my Instructions for the schools. And the theory connected with that practice is set down in the three lectures at the end of the first course I delivered—those on Line, Light, and Colour.

You will have, therefore, to get this book,* and it is the only one which you will need to have of your own,—the others are placed, for reference, where they will be accessible to you.

5. In the 139th paragraph, p. 132, it states the order of your practical study in these terms :

“I wish you to begin by getting command of line ;—that is to say, by learning to draw a steady line, limiting with absolute correctness the form or space you intend it to limit ; to proceed by getting command over flat tints, so that you may be able to fill the spaces you have enclosed evenly, either with shade or colour, according to the school you adopt ; and, finally, to obtain the power of adding such fineness of drawing, within the masses, as shall express their undulation, and their characters of form and texture.”

And now, since in your course of practice you are first required to attain the power of drawing lines accurately and delicately, so in the course of theory, or grammar, I wish you

* My inaugural series of seven lectures, published at the Clarendon Press.

first to learn the principles of linear design, exemplified by the schools which at the top of page 130 you will find characterized as the Schools of Line.

6. If I had command of as much time as I should like to spend with you on this subject, I would begin with the early forms of art which used the simplest linear elements of design. But, for general service and interest, it will be better that I should sketch what has been accomplished by the greatest masters in that manner; the rather that their work is more or less accessible to all, and has developed into the vast industries of modern engraving, one of the most powerful existing influences of education and sources of pleasure among civilized people.

And this investigation, so far from interrupting, will facilitate our examination of the history of the nobler arts. You will see in the preface to my lectures on Greek sculpture that I intend them to be followed by a course on architecture, and that by one on Florentine sculpture. But the art of engraving is so manifestly, at Florence, though not less essentially elsewhere, a basis of style both in architecture and sculpture, that it is absolutely necessary I should explain to you in what the skill of the engraver consists, before I can define with accuracy that of more admired artists. For engraving, though not altogether in the method of which you see examples in the print-shops of the High Street, is, indeed, a prior art to that either of building or sculpture, and is an inseparable part of both, when they are rightly practised.

7. And while we thus examine the scope of this first of the arts, it will be necessary that we learn also the scope of mind of the early practisers of it, and accordingly acquaint ourselves with the main events in the biography of the schools of Florence. To understand the temper and meaning of one great master is to lay the best, if not the only, foundation for the understanding of all; and I shall therefore make it the leading aim of this course of lectures to remind you of what is known, and direct you to what is knowable, of the life and character of the greatest Florentine master of engraving, Sandro Botticelli; and, incidentally, to give you some idea of

the power of the greatest master of the German, or any northern, school, Hans Holbein.

8. You must feel, however, that I am using the word "engraving" in a somewhat different, and, you may imagine, a wider, sense, than that which you are accustomed to attach to it. So far from being a wider sense, it is in reality a more accurate and restricted one, while yet it embraces every conceivable right application of the art. And I wish, in this first lecture, to make entirely clear to you the proper meaning of the word, and proper range of the art of engraving; in my next following lecture, to show you its place in Italian schools, and then, in due order, the place it ought to take in our own, and in all schools.

9. First then, to-day, of the *Differentia*, or essential quality of Engraving, as distinguished from other arts.

What answer would you make to me, if I asked casually what engraving was? Perhaps the readiest which would occur to you would be, "The translation of pictures into black and white by means admitting reduplication of impressions." But if that be done by lithography, we do not call it engraving,—whereas we speak contentedly and continually of seal engraving, in which there is no question of black and white. And, as scholars, you know that this customary mode of speaking is quite accurate; and that engraving means, primarily, making a permanent cut or furrow in something. The central syllable of the word has become a sorrowful one, meaning the most permanent of furrows.

10. But are you prepared absolutely to accept this limitation with respect to engraving as a pictorial art? Will you call nothing an engraving, except a group of furrows or cavities cut in a hard substance? What shall we say of mezzotint engraving, for instance, in which, though indeed furrows and cavities are produced mechanically as a ground, the artist's work is in effacing them? And when we consider the power of engraving in representing pictures and multiplying them, are we to recognize and admire no effects of light and shade except those which are visibly produced by dots or furrows? I mean, will the virtue of an engraving be in ex-

hibiting these imperfect means of its effect, or in concealing them?

11. Here, for instance, is the head of a soldier by Durer,—a mere gridiron of black lines. Would this be better or worse engraving if it were more like a photograph or lithograph, and no lines seen?—suppose, more like the head of Mr. Santley, now in all the music-shops, and really quite deceptive in light and shade, when seen from over the way? Do you think Durer's work would be better if it were more like that? And would you have me, therefore, leaving the question of technical method of production altogether to the craftsman, consider pictorial engraving simply as the production of a light-and-shade drawing, by some method permitting its multiplication for the public?

12. This, you observe, is a very practical question indeed. For instance, the illustrations of my own lectures on sculpture are equivalent to permanent photographs. There can be little doubt that means will be discovered of thus producing perfect facsimiles of artists' drawings; so that, if no more than facsimile be required, the old art of cutting furrows in metal may be considered as, at this day, virtually ended. And, indeed, it is said that line engravers cannot any more get apprentices, and that a pure steel or copper plate is not likely to be again produced, when once the old living masters of the bright field shall have been all laid in their earth-furrows.

13. Suppose, then, that this come to pass; and more than this, suppose that wood engraving also be superseded, and that instead of imperfect transcripts of drawings, on wood-blocks or metal-plates, photography enabled us to give, quite cheaply, and without limit to number facsimiles of the finished light-and-shade drawings of artists themselves. Another group of questions instantly offers itself, on these new conditions; namely, What are the best means for a light-and-shade drawing—the pen, or the pencil, the charcoal, or the flat wash? That is to say, the pen, producing shade by black lines, as old engraving did; the pencil, producing shade by grey lines, variable in force; the charcoal, producing a smoky shadow with no lines in it, or the washed tint, producing a

transparent shadow with no lines in it. Which of these methods is the best?—or have they, each and all, virtues to be separately studied, and distinctively applied?

14. See how curiously the questions multiply on us. 1st, Is engraving to be only considered as cut work? 2nd, For present designs multipliable without cutting, by the sunshine, what methods or instruments of drawing will be best? And now, 3rdly, before we can discuss these questions at all, is there not another lying at the root of both,—namely, what a light-and-shade drawing itself properly *is*, and how it differs, or should differ, from a painting,—whether by mere deficiency, or by some entirely distinct merit?

15. For instance, you know how confidently it is said, in common talk about Turner, that his works are intelligible and beautiful when engraved, though incomprehensible as paintings. Admitting this to be so, do you suppose it is because the translation into light and shade is deficient in some qualities which the painting had, or that it possesses some quality which the painting had not? Does it please more because it is deficient in the colour which confused a feeble spectator, and offended a dogmatic one,—or because it possesses a decision in its steady linear labour which interprets, or corrects, the swift pencilling of the artist?

16. Do you notice the two words I have just used, *Decision*, and *Linear*?—*Decision*, again introducing the idea of cuts or divisions, as opposed to gradations; *Linear*, as opposed to massive or broad?

Yet we use all these words at different times in praise, while they evidently mark inconsistent qualities. Softness and decision, breadth and delineation, cannot co-exist in equal degrees. There must surely therefore be a virtue in the engraving inconsistent with that of the painting, and vice versa.

Now, be clear about these three questions which we have to-day to answer.

A. Is all engraving to be cut work?

B. If it need not be cut work, but only the reproduction of a drawing, what methods of executing a light-and-shade drawing will be best?

C. Is the shaded drawing itself to be considered only as a deficient or imperfect painting, or as a different thing from a painting, having a virtue of its own, belonging to black and white, as opposed to colour?

17. I will give you the answers at once, briefly, and amplify them afterwards.

A. All engraving must be cut work ;—*that* is its differentia. Unless your effect be produced by cutting into some solid substance, it is not engraving at all.

B. The proper methods for light-and-shade drawing vary according to subject, and the degree of completeness desired,—some of them having much in common with engraving, and others with painting.

C. The qualities of a light-and-shade drawing ought to be entirely different from those of a painting. It is not a deficient or partial representation of a coloured scene or picture, but an entirely different reading of either. So that much of what is intelligible in a painting ought to be unintelligible in a light-and-shade study and vice versa.

You have thus three arts,—engraving, light-and-shade drawing, and painting.

Now I am not going to lecture, in this course, on painting, nor on light-and-shade drawing, but on engraving only. But I must tell you something about light-and-shade drawing first ; or, at least, remind you of what I have before told.

18. You see that the three elementary lectures in my first volume are on Line, Light, and Colour,—that is to say, on the modes of art which produce linear designs,—which produce effects of light,—and which produce effects of colour.

I must, for the sake of new students, briefly repeat the explanation of these.

Here is an Arabian vase, in which the pleasure given to the eye is only by lines ;—no effect of light, or of colour, is attempted. Here is a moonlight by Turner, in which there are no lines at all, and no colours at all. The pleasure given to the eye is only by modes of light and shade, or effects of light. Finally, here is an early Florentine painting, in which there are

Nor does the picture in any conspicuous way seem devoid of colour. On the contrary, the herdsman has a scarlet jacket, which comes out rather brilliantly from the mass of shade round it; and a person devoid of colour faculty, or ill taught, might imagine the picture to be really a fine work of colour.

But if you will come up close to it, you will find that the herdsman has brown sleeves, though he has a scarlet jacket; and that the shadows of both are painted with precisely the same brown, and in several places with continuous touches of the pencil. It is only in the light that the scarlet is laid on.

This at once marks the picture as belonging to the lower or chiaroscuro school, even if you had not before recognized it as such by its pretty rendering of sunset effect.

24. You might at first think it a painting which showed greater skill than that of the school of Giotto. But the skill is not the primary question. The power of imagination is the first thing to be asked about. This Italian work imagines, and requires you to imagine also, a St. Elizabeth and St. Mary, to the best of your power. But this Dutch one only wishes you to imagine an effect of sunlight on cowskin, which is a far lower strain of the imaginative faculty.

Also, as you may see the effect of sunlight on cowskin, in reality, any summer afternoon, but cannot so frequently see a St. Elizabeth, it is a far less useful strain of the imaginative faculty.

And, generally speaking, the Dutch chiaroscurists are indeed persons without imagination at all,—who, not being able to get any pleasure out of their thoughts, try to get it out of their sensations; note, however, also their technical connection with the Greek school of shade, (see my sixth inaugural lecture, p. 158,) in which colour was refused, not for the sake of deception, but of solemnity.

25. With these final motives you are not now concerned; your present business is the quite easy one of knowing, and noticing, the universal distinction between the methods of treatment in which the aim is light, and in which it is colour; and so to keep yourselves guarded from the danger of being misled by the, often very ingenious, talk of persons who have

vivid colour sensations without having learned to distinguish them from what else pleases them in pictures. There is an interesting volume by Professor Taine on the Dutch school containing a valuable historical analysis of the influences which formed it; but full of the gravest errors, resulting from the confusion in his mind between colour and tone, in consequence of which he imagines the Dutch painters to be colourists.

26. It is so important for you to be grounded securely in these first elements of pictorial treatment, that I will be so far tedious as to show you one more instance of the relative intellectual value of the pure colour and pure *chiaroscuro* school, not in Dutch and Florentine, but in English art. Here is a copy of one of the lost frescoes of our Painted Chamber of Westminster;—fourteenth-century work, entirely conceived in colour, and calculated for decorative effect. There is no more light and shade in it than in a Queen of Hearts in a pack of cards; all that the painter at first wants you to see is that the young lady has a white forehead, and a golden crown, and a fair neck, and a violet robe, and a crimson shield with golden leopards on it; and that behind her is a clear blue sky. Then, farther, he wants you to read her name, "Debonnairete," which, when you have read, he farther expects you to consider what it is to be debonnaire, and to remember your Chaucer's description of the virtue:—

She was not brown, nor dun of hue,
But white as snowe, fallen new,
With eyen glad, and browes bent,
Her hair down to her heeles went,
And she was simple, as dove on tree,
Full debonnair of heart was she.

27. You see Chaucer dwells on the color just as much as the painter does, but the painter has also given her the English shield to bear, meaning that good-humour, or debonnairete, cannot be maintained by self-indulgence;—only by fortitude. Farther note, with Chaucer, the "eyen glad," and brows "bent" (high-arched and calm), the strong life (hair down to

the heels,) and that her gladness is to be without subtlety,—that is to say, without the slightest pleasure in any form of advantage-taking, or any shrewd or mocking wit: “she was simple as dove on tree;” and you will find that the colour-painting, both in the fresco and in the poem, is in the very highest degree didactic and intellectual; and distinguished, as being so, from all inferior forms of art. Farther, that it requires you yourself first to understand the nature of simplicity, and to like simplicity in young ladies better than subtlety; and to understand why the second of Love’s five kind arrows (*Beauté* being the first),

Simplece ot nom, la seconde
Qui maint homme parmi le monde
Et mainte dame fait amer.

Nor must you leave the picture without observing that there is another reason for *Debonnairete*’s bearing the Royal shield,—of all shields that, rather than another. “*De-bonne-aire*” meant originally “out of a good eagle’s nest,” the “*aire*” signifying the eagle’s nest or *eyrie* especially, because it is flat, the Latin “*area*” being the root of all.

And this coming out of a good nest is recognized as, of all things, needfullest to give the strength which enables people to be good-humoured; and thus you have “*debonnaire*” forming the third word of the group, with “gentle” and “kind,” all first signifying “of good race.”

You will gradually see, as we go on, more and more why I called my third volume of lectures *Eagle’s Nest*; for I am not fantastic in these titles, as is often said; but try shortly to mark my chief purpose in the book by them.

28. Now for comparison with this old art, here is a modern engraving, in which colour is entirely ignored; and light and shade alone are used to produce what is supposed to be a piece of impressive religious instruction. But it is not a piece of religious instruction at all;—only a piece of religious sensation, prepared for the sentimental pleasure of young ladies; whom (since I am honoured to-day by the presence of many) I will take the opportunity of warning against such

pleasantly did in that day,—you remember Goldsmith's weakness on the point—wear coats of tints of dark red, blue, or violet. There are some thirty gentlemen in the room, and perhaps seven or eight different tints of subdued claret-colour in their coats; and yet every coat is kept so distinctly of its own proper claret-colour, that each gentleman's servant would know his master's.

Yet the whole canvas is so grey and quiet, that as I now hold it by this Dutch landscape, with the vermilion jacket, you would fancy Hogarth's had no colour in it at all, and that the Dutchman was half-way to becoming a Titian; whereas Hogarth's is a consummate piece of the most perfect colourist school, which Titian could not beat, in its way; and the Dutchman could no more paint half an inch of it than he could summon a rainbow into the clouds.

32. Here then, you see, are, altogether, five works, all of the absolutely pure colour school:—

1. One, Indian,—Religious Art;
2. One, Florentine,—Religious Art;
3. One, English, from Painted Chamber, Westminster,—Ethic Art;
4. One, English,—Hogarth,—Naturalistic Art;
5. One, English,—to-day sold in the High Street,—Caricaturist Art.

And of these, the Florentine and old English are divine work, God-inspired; full, indeed, of faults and innocencies, but divine, as good children are.

Then this by Hogarth is entirely wise and right; but worldly-wise, not divine.

While the old Indian, and this, with which we feed our children at this hour, are entirely damnable art;—every bit of it done by the direct inspiration of the devil,—feeble, ridiculous,—yet mortally poisonous to every noble quality in body and soul.

33. I have now, I hope, guarded you sufficiently from the danger either of confusing the inferior school of chiaroscuro with that of colour, or of imagining that a work must necessarily be good, on the sole ground of its belonging to the

wood, metal,—we shall have three great schools of engraving to investigate in each material.

35. On tablet of stone, on tablet of wood, on tablet of steel,—the first giving the law to everything; the second true Athenian, like Athena's first statue in olive-wood, making the law legible and homely; and the third true Vulcanian, having the splendour and power of accomplished labour.

Now of stone engraving, which is joined inseparably with sculpture and architecture, I am not going to speak at length in this course of lectures. I shall speak only of wood and metal engraving. But there is one circumstance in stone engraving which it is necessary to observe in connection with the other two branches of the art.

The great difficulty for a primitive engraver is to make his scratch deep enough to be visible. Visibility is quite as essential to your fame as permanence; and if you have only your furrow to depend on, the engraved tablet, at certain times of day, will be illegible, and passed without notice.

But suppose you fill in your furrow with something black, then it will be legible enough at once; and if the black fall out or wash out, still your furrow is there, and may be filled again by anybody.

Therefore, the noble stone engravers, using marble to receive their furrow, fill that furrow with marble ink.

And you have an engraved plate to purpose;—with the whole sky for its margin! Look here—the front of the church of San Michele of Lucca,—white marble with green serpentine for ink; or here,—the steps of the Giant's Stair, with lead for ink; or here,—the floor of the Pisan Duomo, with porphyry for ink. Such cutting, filled in with colour or with black, branches into all sorts of developments,—Florentine mosaic on the one hand, niello on the other, and infinite minor arts.

36. Yet we must not make this filling with colour part of our definition of engraving. To engrave is, in final strictness, “to decorate a surface with furrows.” (Cameos, in accurate terms, are minute sculptures, not engravings.) A ploughed

field is the purest type of such art ; and is, on hilly land, an exquisite piece of decoration.

Therefore it will follow that engraving distinguishes itself from ordinary drawing by greater need of muscular effort.

The quality of a pen drawing is to be produced easily,—deliberately, always,* but with a point that *glides* over the paper. Engraving, on the contrary, requires always force, and its virtue is that of a line produced by pressure, or by blows of a chisel.

It involves, therefore, always, ideas of power and dexterity, but also of restraint ; and the delight you take in it should involve the understanding of the difficulty the workman dealt with. You perhaps doubt the extent to which this feeling justly extends, (in the first volume of "Modern Painters," expressed under the head "Ideas of Power.") But why is a large stone in any building grander than a small one ? Simply because it was more difficult to raise it. So, also, an engraved line is, and ought to be, recognized as more grand than a pen or pencil line, because it was more difficult to execute it.

In this mosaic of Lucca front you forgive much, and admire much, because you see it is all cut in stone. So, in wood and steel, you ought to see that every line has been costly ; but observe, costly of deliberative, no less than athletic or executive power. The main use of the restraint which makes the line difficult to draw, is to give time and motive for deliberation in drawing it, and to ensure its being the best in your power.

37. For, as with deliberation, so without repentance, your engraved line must be. It may, indeed, be burnished or beaten out again in metal, or patched and botched in stone ; but always to disadvantage, and at pains which must not be incurred often. And there is a singular evidence in one of Durer's finest plates that, in his time, or at least in his manner of work, it was not possible at all. Among the disputes as to the meaning of Durer's Knight and Death, you will find it sometimes suggested, or insisted, that the horse's raised foot

* Compare Inaugural Lectures, § 144.

is going to fall into a snare. What has been fancied a noose is only the former outline of the horse's foot and limb, unfaced.

The engraved line is therefore to be conclusive ; not experimental. "I have determined this," says the engraver. Much excellent pen drawing is excellent in being tentative,—in being experimental. Indeterminate, not through want of meaning, but through fulness of it—halting *wisely* between two opinions—feeling cautiously after clearer opinions. But your engraver has made up his opinion. This is so, and must for ever be so, he tells you. A very proper thing for a thoughtful man to say ; a very improper and impertinent thing for a foolish one to say. Foolish engraving is consummately foolish work. Look,—all the world,—look for evermore, says the foolish engraver ; see what a fool I have been. How many lines I have laid for nothing. How many lines upon lines, with no precept, much less superprecept.

38. Here, then, are two definite ethical characters in all engraved work. It is Athletic ; and it is Resolute. Add one more ; that it is Obedient ;—in their infancy the nurse, but in their youth the slave, of the higher arts ; servile, both in the mechanism and labour of it, and in its function of interpreting the schools of painting as superior to itself.

And this relation to the higher arts we will study at the source of chief power in all the normal skill of Christendom, Florence ; and chiefly, as I said, in the work of one Florentine master, Sandro Botticelli.

LECTURE II.

THE RELATION OF ENGRAVING TO OTHER ARTS IN FLORENCE.

39. FROM what was laid before you in my last lecture, you must now be aware that I do not mean, by the word 'engraving,' merely the separate art of producing plates from which black pictures may be printed.

I mean, by engraving, the art of producing decoration on a surface by the touches of a chisel or a burin ; and I mean by

its relation to other arts, the subordinate surface of this linear work, in sculpture, in metal work, and in painting; or in the representation and repetition of painting.

And first, therefore, I have to map out the broad relations of the arts of sculpture, metal work, and painting, in Florence, among themselves, during the period in which the art of engraving was distinctly connected with them.*

40. You will find, or may remember, that in my lecture on Michael Angelo and Tintoret I indicated the singular importance, in the history of art, of a space of forty years, between 1480, and the year in which Raphael died, 1520. Within that space of time the change was completed, from the principles of ancient, to those of existing, art;—a manifold change, not definable in brief terms, but most clearly characterized, and easily remembered, as the change of conscientious and didactic art, into that which proposes to itself no duty beyond technical skill, and no object but the pleasure of the beholder. Of that momentous change itself I do not purpose to speak in the present course of lectures; but my endeavour will be to lay before you a rough chart of the course of the arts in Florence up to the time when it took place; a chart indicating for you, definitely, the growth of conscience, in work which is distinctively conscientious, and the perfecting of expression and means of popular address, in that which is distinctively didactic.

41. Means of popular address, observe, which have become singularly important to us at this day. Nevertheless, remember that the power of printing, or reprinting, black *pictures*,—practically contemporary with that of reprinting black *letters*,—modified the art of the draughtsman only as it modified that of the scribe. Beautiful and unique writing, as beautiful and unique painting or engraving, remain exactly what they were; but other useful and reproductive methods of both have been superadded. Of these, it is acutely said by Dr. Alfred Woltmann,†—

* Compare Aratra Pentelici, § 154.

† “Holbein and His Time,” 4to, Bentley, 1872, (a very valuable book,) p. 17. Italics mine.

"A far more important part is played in the art-life of Germany by the technical arts for the *multiplying* of works; for Germany, while it was the land of book-printing, is also the land of picture-printing. Indeed, wood-engraving, which preceded the invention of book-printing, *prepared the way for it and only left one step more necessary for it.* Book-printing and picture-printing have both the same inner cause for their origin, namely, the impulse to make each mental gain a common blessing. Not merely princes and rich nobles were to have the privilege of adorning their private chapels and apartments with beautiful religious pictures; the poorest man was also to have his delight in that which the artist had devised and produced. It was not sufficient for him when it stood in the church as an altar-shrine, visible to him and to the congregation from afar; he desired to have it as his own, to carry it about with him, to bring it into his own home. The grand importance of wood-engraving and copperplate is not sufficiently estimated in historical investigations. They were not alone of use in the advance of art; they form an epoch in the entire life of mind and culture. The idea embodied and multiplied in pictures became like that embodied in the printed word, the herald of every intellectual movement, and conquered the world."

42. "Conquered the world"? The rest of the sentence is true, but this, hyperbolic, and greatly false. It should have been said that both painting and engraving have conquered much of the good in the world, and, hitherto, little or none of the evil.

Nor do I hold it usually an advantage to art, in teaching, that it *should* be common, or constantly seen. In becoming intelligibly and kindly beautiful, while it remains solitary and unrivalled, it has a greater power. Westminster Abbey is more didactic to the English nation, than a million of popular illustrated treatises on architecture.

Nay, even that it cannot be understood but with some difficulty, and must be sought before it can be seen, is no harm. The noblest didactic art is, as it were, set on a hill, and its disciples come to it. The vilest destructive and corrosive art stands at the street corners, crying, "Turn in hither; come, eat of my bread, and drink of my wine, which I have mingled."

And Dr. Woltmann has allowed himself too easily to fall into the common notion of Liberalism, that bad art, disseminated, is instructive, and good art isolated, not so. The question is, first, I assure you, whether what art you have got is good or bad. If essentially bad, the more you see of it, the worse for you. Entirely popular art is all that is noble, in the cathedral, the council chamber, and the market-place ; not the paltry coloured print pinned on the wall of a private room.

43. I despise the poor!—do I, think you? Not so. They only despise the poor who think them better off with police news, and coloured tracts of the story of Joseph and Potiphar's wife, than they were with Luini painting on their church walls, and Donatello carving the pillars of their Market-places.

Nevertheless, the effort to be universally, instead of locally, didactic, modified advantageously, as you know, and in a thousand ways varied, the earlier art of engraving : and the development of its popular power, whether for good or evil, came exactly—so fate appointed—at a time when the minds of the masses were agitated by the struggle which closed in the Reformation in some countries, and in the desperate refusal of Reformation in others.* The two greatest masters of engraving whose lives we are to study, were, both of them, passionate reformers : Holbein no less than Luther ; Botticelli no less than Savonarola.

44. Reformers, I mean, in the full and, accurately, the only, sense. Not preachers of new doctrines ; but witnesses against the betrayal of the old ones which were on the lips of all men, and in the lives of none. Nay, the painters are indeed more pure reformers than the priests. They rebuked the manifest vices of men, while they realized whatever was loveliest in their faith. Priestly reform soon enraged itself into mere contest for personal opinions ; while, without rage, but in stern rebuke of all that was vile in conduct or thought,—in declaration of the always-received faiths of the Christian

* See Carlyle, Frederick, Book III., chap. viii.

Church, and in warning of the power of faith, and death,* over the petty designs of men,—Botticelli and Holbein together fought foremost in the ranks of the reformation.

45. To-day I will endeavour to explain how they attained such rank. Then, in the next two lectures, the technics of both,—their way of speaking; and in the last two, what they had got to say.

First, then, we ask how they attained this rank;—who taught *them* what they were finally best to teach? How far must every people—how far did this Florentine people—teach its masters, before *they* could teach *it*?

Even in these days, when every man is, by hypothesis, as good as another, does not the question sound strange to you? You recognize in the past, as you think, clearly, that national advance takes place always under the guidance of masters, or groups of masters, possessed of what appears to be some new personal sensibility or gift of invention; and we are apt to be reverent to these alone, as if the nation itself had been unprogressive, and suddenly awakened, or converted, by the genius of one man.

No idea can be more superficial. Every nation must teach its tutors, and prepare itself to receive them; but the fact on which our impression is founded—the rising, apparently by chance, of men whose singular gifts suddenly melt the multitude, already at the point of fusion; or suddenly form, and *inform*, the multitude which has gained coherence enough to be capable of formation,—enables us to measure and map the gain of national intellectual territory, by tracing first the lifting of the mountain chains of its genius.

46. I have told you that we have nothing to do at present with the great transition from ancient to modern habits of thought which took place at the beginning of the sixteenth century. I only want to go as far as that point;—where we

* I believe I am taking too much trouble in writing these lectures. This sentence, § 44, has cost me, I suppose, first and last, about as many hours as there are lines in it;—and my choice of these two words, faith and death, as representatives of power, will perhaps, after all, only puzzle the reader.

tity of time you must nowadays spend in trying which can hit balls farthest. So I will put the task into the simplest form I can.

Here are the names of the twenty-five men,* and opposite each, a line indicating the length of his life, and the position of it in his century. The diagram still, however, needs a few words of explanation. Very chiefly, for those who know anything of my writings, there is needed explanation of its not including the names of Titian, Reynolds, Velasquez, Turner, and other such men, always reverently put before you at other times.

They are absent, because I have no fear of your not looking at these. All your lives through, if you care about art, you will be looking at them. But while you are here at Oxford, I want to make you learn what you should know of these earlier, many of them weaker, men, who yet, for the very reason of their greater simplicity of power, are better guides for you, and of whom some will remain guides to all generations. And, as regards the subject of our present course, I have a still more weighty reason ;—Vandyke, Gainsborough, Titian, Reynolds, Velasquez, and the rest, are essentially portrait painters. They give you the likeness of a man : they have nothing to say either about his future life, or his gods. 'That is the look of him,' they say : 'here, on earth, we know no more.'

49. But these, whose names I have engraved, have something to say—generally much,—either about the future life of man, or about his gods. They are therefore, literally, seers or prophets. False prophets, it may be, or foolish ones ; of that you must judge ; but you must read before you can judge ; and read (or hear) them consistently ; for you don't know them till you have heard them out. But with Sir Joshua, or Titian, one portrait is as another : it is here a pretty lady, there a great lord ; but speechless, all ;—whereas, with these twenty-five men, each picture or statue is not

* The diagram used at the lecture is engraved on the opposite leaf ; the reader had better draw it larger for himself, as it had to be made inconveniently small for this size of leaf.

years 1300, 1400, and 1500 running through them,—holding the names of nearly all the men I want you to study in easily remembered groups of five, five, and seven. And these three groups I shall hereafter call the 1300 group, 1400 group, and 1500 group.

53. But why should four unfortunate masters be dropped out?

Well, I want to drop them out, at any rate ; but not in disrespect. In hope, on the contrary, to make you remember them very separately indeed ;—for this following reason.

We are in the careless habit of speaking of men who form a great number of pupils, and have a host of inferior satellites round them, as masters of great schools.

But before you call a man a master, you should ask, Are his pupils greater or less than himself? If they are greater than himself, he is a master indeed ;—he has been a true teacher. But if all his pupils are less than himself, he may have been a great *man*, but in all probability has been a bad *master*, or no master.

Now these men, whom I have signally left out of my groups, are true *Masters*.

Niccola Pisano taught all Italy ; but chiefly his own son, who succeeded, and in some things very much surpassed him.

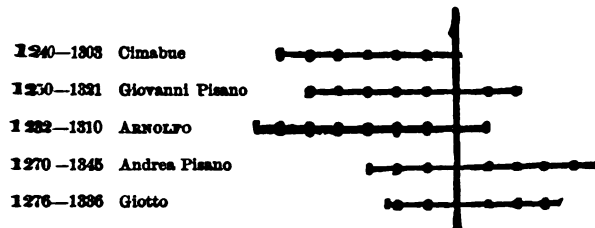
Orcagna taught all Italy, after him, down to Michael Angelo. And these two—Lippi, the religious schools, Verrocchio, the artist schools, of their century.

Lippi taught Sandro Botticelli ; and Verrocchio taught Leonardo da Vinci, Lorenzo di Credi, and Perugino. Have I not good reason to separate the masters of such pupils from the schools they created?

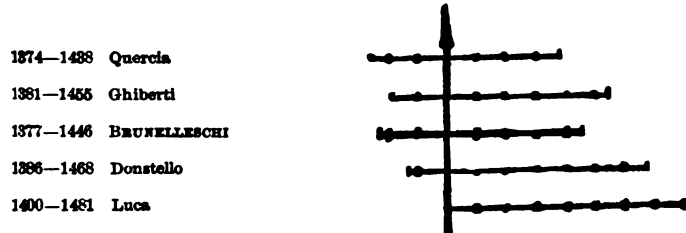
54. But how is it that I can drop just the cards I want out of my pack?

Well certainly I force and fit matters a little : I leave some men out of my list whom I should like to have in it ;—Benozzo, Gozzoli, for instance, and Mino da Fiesole ; but I can do without them, and so can you also, for the present. I catch Luca by a hair's-breadth only, with my 1400 rod ; but

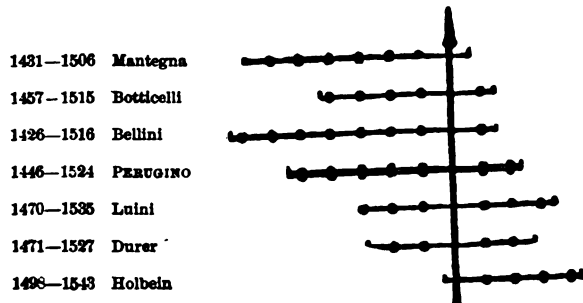
1300.



1400.



1500.



on the whole, with very little coaxing, I get the groups in this memorable and quite literally 'handy' form. For see, I write my list of five, five, and seven, on bits of pasteboard ; I hinge my rods to these ; and you can brandish the school of 1400 in your left hand, and of 1500 in your right, like—railway signals ;—and I wish all railway signals were as clear. Once learn, thoroughly, the groups in this artificially contracted form, and you can refine and complete afterwards at your leisure.

55. And thus actually flourishing my two pennons, and getting my grip of the men, in either hand, I find a notable thing concerning my two flags. The men whose names I hold in my left hand are all sculptors ; the men whose names I hold in my right are all painters.

You will infallibly suspect me of having chosen them thus on purpose. No, honour bright !—I chose simply the greatest men,—those I wanted to talk to you about. I arranged them by their dates ; I put them into three conclusive pennons ; and behold what follows !

56. Farther, note this : in the 1300 group, four out of the five men are architects as well as sculptors and painters. In the 1400 group, there is one architect ; in the 1500, none. And the meaning of that is, that in 1300 the arts were all united, and duly led by architecture ; in 1400, sculpture began to assume too separate a power to herself ; in 1500, painting arrogated all, and, at last, betrayed all. From which, with much other collateral evidence, you may justly conclude that the three arts ought to be practised together, and that they naturally are so. I long since asserted that no man could be an architect who was not a sculptor. As I learned more and more of my business, I perceived also that no man could be a sculptor who was not an architect ;—that is to say, who had not knowledge enough, and pleasure enough in structural law, to be able to build, on occasion, better than a mere builder. And so, finally, I now positively aver to you that nobody, in the graphic arts, can be quite rightly a master of anything, who is not master of everything !

57. The junction of the three arts in men's minds, at the

best times, is shortly signified in these words of Chaucer.
Love's Garden,

Everidele

Enclosed was, and walled well
With high walls, embatailled,
Portrayed without, and well entayled
With many rich portraitures.

The French original is better still, and gives four arts in unison :—

Quant suis avant un pou alé
Et vy un vergier grant et le,
Bien cloz de bon mur batillié
Pourtrait dehors, et entaillié
Ou (for au) maintes riches escriptures.

Read also carefully the description of the temples of Mars and Venus in the Knight's Tale. Contemporary French uses 'entaille' even of solid sculpture and of the living form ; and Pygmalion, as a perfect master, professes wood carving, ivory carving, wax-work, and iron-work, no less than stone sculpture :—

Pimalion, uns entaillieres
Pourtraians en fuz * et en pierres,
En mettaux, en os, et en cire,
Et en toute autre matiere.

58. I made a little sketch, when last in Florence, of a subject which will fix the idea of this unity of the arts in your minds. At the base of the tower of Giotto are two rows of hexagonal panels, filled with bas-reliefs. Some of these are by unknown hands,—some by Andrea Pisano, some by Luca della Robbia, two by Giotto himself ; of these I sketched the panel representing the art of Painting.

You have in that bas-relief one of the foundation-stones of the most perfectly-built tower in Europe ; you have that stone carved by its architect's own hand ; you find, further, that this

* For fust, log of wood, erroneously 'fer' in the later printed editions. Compare the account of the works of Art and Nature, towards the end of the Romance of the Rose.

architect and sculptor was the greatest painter of his time, and the friend of the greatest poet ; and you have represented by him a painter in his shop,—bottega,—as symbolic of the entire art of painting.

59. In which representation, please note how carefully Giotto shows you the tabernacles, or niches, in which the paintings are to be placed. Not independent of their frames, these panels of his, you see !

Have you ever considered, in the early history of painting, how important also is the history of the frame maker ? It is a matter, I assure you, needing your very best consideration. For the frame was made before the picture. The painted window is much, but the aperture it fills was thought of before it. The fresco by Giotto is much, but the vault it adorns was planned first. Who thought of these ;—who built ?

Questions taking us far back before the birth of the shepherd boy of Fesolú,—questions not to be answered by history of painting only, still less of painting in *Italy* only.

60. And in pointing out to you this fact, I may once for all prove to you the essential unity of the arts, and show you how impossible it is to understand one without reference to another. Which I wish you to observe all the more closely, that you may use, without danger of being misled, the data, of unequalled value, which have been collected by Crowe and Cavalcasella, in the book which they have called a *History of Painting in Italy*, but which is in fact only a dictionary of details relating to that history. Such a title is an absurdity on the face of it. For, first, you can no more write the history of painting in Italy than you can write the history of the south wind in Italy. The sirocco does indeed produce certain effects at Genoa, and others at Rome ; but what would be the value of a treatise upon the winds, which, for the honour of any country, assumed that every city of it had a native sirocco ?

But, further,—imagine what success would attend the meteorologist who should set himself to give an account of the south wind, but take no notice of the north !

And, finally, suppose an attempt to give you an account of

either wind, but none of the seas, or mountain passes, by which they were nourished, or directed.

61. For instance, I am in this course of lectures to give you an account of a single and minor branch of graphic art,—engraving. But observe how many references to local circumstances it involves. There are three materials for it, we said;—stone, wood, and metal. Stone engraving is the art of countries possessing marble and gems; wood engraving, of countries overgrown with forest; metal engraving, of countries possessing treasures of silver and gold. And the style of a stone engraver is formed on pillars and pyramids; the style of a wood engraver under the eaves of larch cottages; the style of a metal engraver in the treasuries of kings. Do you suppose I could rightly explain to you the value of a single touch on brass by Finiguerra, or on box by Bewick, unless I had grasp of the great laws of climate and country; and could trace the inherited sirocco or tramontana of thought to which the souls and bodies of the men owed their existence?

62. You see that in this flag of 1300 there is a dark strong line in the centre, against which you read the name of Arnolfo.

In writing our Florentine Dunciad, or History of Fools, can we possibly begin with a better day than All Fools' Day? On All Fools' Day—the first, if you like better so to call it, of the month of *opening*,—in the year 1300, is signed the document making Arnolfo a citizen of Florence, and in 1310 he dies, chief master of the works of the Cathedral there. To this man, Crowe and Cavalcasella give half a page, out of three volumes of five hundred pages each.

But lower down in my flag, (not put there because of any inferiority, but by order of chronology,) you will see a name sufficiently familiar to you—that of Giotto; and to him, our historians of painting in Italy give some hundred pages, under the impression, stated by them at page 243 of their volume, that “in his hands, art in the Peninsula became entitled for the first time to the name of Italian.”

63. Art became Italian! Yes, but *what* art? Your authors give a perspective—or what they call such,—of the upper

church of Assisi, as if that were merely an accidental occurrence of blind walls for Giotto to paint on !

But how came the upper church of Assisi there ? How came it to be vaulted—to be aisled ? How came Giotto to be asked to paint upon it ?

The art that built it, good or bad, must have been an Italian one, before Giotto. He could not have painted on the air. Let us see how his panels were made for him.

64. This Captain—the centre of our first group—Arnolfo, has always hitherto been called ‘Arnolfo di Lapo ;’—Arnolfo the son of Lapo.

Modern investigators come down on us delightedly, to tell us—Arnolfo was *not* the son of Lapo.

In these days you will have half a dozen doctors, writing each a long book, and the sense of all will be,—Arnolfo wasn’t the son of Lapo. Much good may you get of that !

Well, you will find the fact to be, there was a great Northman builder, a true son of Thor, who came down into Italy in 1200, served the order of St. Francis there, built Assisi, taught Arnolfo how to build, with Thor’s hammer, and disappeared, leaving his name uncertain—Jacopo—Lapo—nobody knows what. Arnolfo always recognizes this man as his true father, who put the soul-life into him ; he is known to his Florentines always as Lapo’s Arnolfo.

That, or some likeness of that, is the vital fact. You never can get at the literal limitation of living facts. They disguise themselves by the very strength of their life : get told again and again in different ways by all manner of people ;—the literalness of them is turned topsy-turvy, inside-out, over and over again ;—then the fools come and read them wrong side upwards, or else, say there never was a fact at all. Nothing delights a true blockhead so much as to prove a negative ;—to show that everybody has been wrong. Fancy the delicious sensation, to an empty-headed creature, of fancying for a moment that he has emptied everybody else’s head as well as his own ! nay, that, for once, his own hollow bottle of a head has had the best of other bottles, and has been *first* empty ; first to know—nothing.

65. Hold, then, steadily the first tradition about this Arnolfo. That his real father was called "Cambio" matters to you not a straw. That he never called himself Cambio's Arnolfo—that nobody else ever called him so, down to Vasari's time, is an infinitely significant fact to you. In my twenty-second letter in *Fors Clavigera* you will find some account of the noble habit of the Italian artists to call themselves by their masters' names, considering their master as their true father. If not the name of the master, they take that of their native place, as having owed the character of their life to that. They rarely take their own family name: sometimes it is not even known,—when best known, it is unfamiliar to us. The great Pisan artists, for instance, never bear any other name than 'the Pisan'; among the other five-and-twenty names in my list, not above six, I think, the two German, with four Italian, are family names. Perugino, (Peter of Perugia), Luini, (Bernard of Luino), Quercia, (James of Quercia), Correggio, (Anthony of Correggio), are named from their native places. Nobody would have understood me if I had called Giotto, 'Ambrose Bondone'; or Tintoret, Robusti; or even Raphael, Sanzio. Botticelli is named from his master; Ghiberti from his father-in-law; and Ghirlandajo from his work. Orcagna, who *did*, for a wonder, name himself from his father, Andrea Cione, of Florence, has been always called 'Angel' by everybody else; while Arnolfo, who never named himself from his father, is now like to be fathered against his will.

But, I again beg of you, keep to the old story. For it represents, however inaccurately in detail, clearly in sum, the fact, that some great master of German Gothic at this time came down into Italy, and changed the entire form of Italian architecture by his touch. So that while Niccola and Giovanni Pisano are still virtually Greek artists, experimentally introducing Gothic forms, Arnolfo and Giotto adopt the entire Gothic ideal of form, and thenceforward use the pointed arch and steep gable as the limits of sculpture.

66. Hitherto I have been speaking of the relations of my twenty-five men to each other. But now, please note their

relations altogether to the art before them. These twenty-five include, I say, all the great masters of *Christian* art.

Before them, the art was too savage to be Christian; afterwards, too carnal to be Christian.

Too savage to be Christian? I will justify that assertion hereafter; but you will find that the European art of 1200 includes all the most developed and characteristic conditions of the style in the north which you have probably been accustomed to think of as NORMAN, and which you may always most conveniently call so; and the most developed conditions of the style in the south, which, formed out of effete Greek, Persian, and Roman tradition, you may, in like manner, most conveniently express by the familiar word BYZANTINE. Whatever you call them, they are in origin adverse in temper, and remain so up to the year 1200. Then an influence appears, seemingly that of one man, Nicholas the Pisan, (our first MASTER, observe,) and a new spirit adopts what is best in each, and gives to what it adopts a new energy of its own, namely, this conscientious and didactic power which is the speciality of its progressive existence. And just as the new-born and natural art of Athens collects and reanimates Pelasgian and Egyptian tradition, purifying their worship, and perfecting their work, into the living heathen faith of the world, so this new-born and natural art of Florence collects and animates the Norman and Byzantine tradition, and forms out of the perfected worship and work of both, the honest Christian faith, and vital craftsmanship, of the world.

67. Get this first summary, therefore, well into your minds. The word 'Norman' I use roughly for North-savage;—roughly, but advisedly. I mean Lombard, Scandinavian, Frankish; everything north-savage that you can think of, except Saxon. (I have a reason for that exception; never mind it just now.)*

*Of course it would have been impossible to express in any accurate terms, short enough for the compass of a lecture, the conditions of opposition between the Heptarchy and the Northmen;—between the Byzantine and Roman;—and between the Byzantine and Arab, which form minor, but not less trenchant, divisions of Art-province, for subsequent

All north-savage I call NORMAN, all south-savage I call BYZANTINE ; this latter including dead native Greek primarily—then dead foreign Greek, in Rome ;—then Arabian—Persian—Phœnician—Indian—all you can think of, in art of hot countries, up to this year 1200, I rank under the one term Byzantine. Now all this cold art—Norman, and all this hot art—Byzantine, is virtually dead, till 1200. It has no conscience, no didactic power ;* it is devoid of both, in the sense that dreams are.

Then in the 13th century, men wake as if they heard an alarum through the whole vault of heaven, and true human life begins again, and the cradle of this life is the Val d'Arno. There the northern and southern nations meet ; there they lay down their enmities ; there they are first baptized unto John's baptism for the remission of sins ; there is born, and thence exiled,—thought faithless for breaking the font of baptism to save a child from drowning, in his 'bel San Giovanni,'—the greatest of Christian poets ; he who had pity even for the lost.

68. Now, therefore, my whole history of *Christian architecture* and painting begins with this Baptistery of Florence, and with its associated Cathedral. Arnolfo brought the one into the form in which you now see it ; he laid the foundation of the other, and that to purpose, and he is therefore the CAPTAIN of our first school.

For this Florentine Baptistery† is the great one of the world. Here is the centre of Christian knowledge and power. delineation. If you can refer to my "Stones of Venice," see § 20 of its first chapter.

* Again much too broad a statement: not to be qualified but by a length of explanation here impossible. My lectures on Architecture, now in preparation, will contain further detail.

† At the side of my page, here, I find the following memorandum, which was expanded in the viva-voce lecture. The reader must make what he can of it, for I can't expand it here.

Sense of Italian Church plan.

Baptistery, to make Christians in ; house, or dome, for them to pray and be preached to in ; bell-tower, to ring all over the town, when they were either to pray together, rejoice together, or to be warned of danger.

Harvey's picture of the Covenanters, with a shepherd on the outlook, as a campanile.

never untender, never untrue. Not Tintoret in power, not Raphael in flexibility, not Holbein in veracity, not Luini in love,—their gathered gifts he has, in balanced and fruitful measure, fit to be the guide, and impulse, and father of all.

LECTURE III.

THE TECHNICS OF WOOD ENGRAVING.

73. I AM to-day to begin to tell you what it is necessary you should observe respecting methods of manual execution in the two great arts of engraving. Only to *begin* to tell you. There need be no end of telling you such things, if you care to hear them. The theory of art is soon mastered; but 'dal detto al fatto, v'e gran tratto;' and as I have several times told you in former lectures, every day shows me more and more the importance of the Hand.

74. Of the hand as a Servant, observe,—not of the hand as a Master. For there are two great kinds of manual work: one in which the hand is continually receiving and obeying orders; the other in which it is acting independently, or even giving orders of its own. And the dependent and submissive hand is a noble hand; but the independent or imperative hand is a vile one.

That is to say, as long as the pen, or chisel, or other graphic instrument, is moved under the direct influence of mental attention, and obeys orders of the brain, it is working nobly; the moment it moves independently of them, and performs some habitual dexterity of its own, it is base.

75. *Dexterity*—I say;—some 'right-handedness' of its own. We might wisely keep that word for what the hand does at the mind's bidding; and use an opposite word—*sinisterity*,—for what it does at its own. For indeed we want such a word in speaking of modern art;—it is all full of *sinisterity*. Hands independent of brains;—the left hand, by division of labour, not knowing what the right does,—still less what it ought to do.

76. Turning, then, to our special subject. All engraving, I said, is intaglio in the solid. But the solid, in wood engraving, is a coarse substance, easily cut; and in metal, a fine substance, not easily. Therefore, in general, you may be prepared to accept ruder and more elementary work in one than the other; and it will be the means of appeal to blunter minds.

You probably already know the difference between the actual methods of producing a printed impression from wood and metal; but I may perhaps make the matter a little more clear. In metal engraving, you cut ditches, fill them with ink, and press your paper into them. In wood engraving, you leave ridges, rub the tops of them with ink, and stamp them on your paper.

The instrument with which the substance, whether of the wood or steel, is cut away, is the same. It is a solid ploughshare, which, instead of throwing the earth aside, throws it up and out, producing at first a simple ravine, or furrow, in the wood or metal, which you can widen by another cut, or extend by successive cuts. This (Fig. 1) is the general shape of the solid ploughshare:



FIG. 1.

but it is of course made sharper or blunter at pleasure. The furrow produced is at first the wedge-shaped or cuneiform ravine, already so much dwelt upon in my lectures on Greek sculpture.

77. Since, then, in wood printing, you print from the surface left solid; and, in metal printing, from the hollows cut into it, it follows that if you put few touches on wood, you draw, as on a slate, with white lines, leaving a quantity of black; but if you put few touches on metal, you draw with black lines, leaving a quantity of white.

Now the eye is not in the least offended by quantity of white, but is, or ought to be, greatly saddened and offended

by quantity of black. Hence it follows that you must never put little work on wood. You must not sketch upon it. You may sketch on metal as much as you please.

78. "Paradox," you will say, as usual. "Are not all our journals,—and the best of them, *Punch*, par excellence,—full of the most brilliantly swift and slight sketches, engraved on wood; while line-engravings take ten years to produce, and cost ten guineas each when they are done?"

Yes, that is so; but observe, in the first place, what appears to you a sketch on wood is not so at all, but a most laborious and careful imitation of a sketch on paper; whereas when you see what appears to be a sketch on metal, it is one. And in the second place, so far as the popular fashion is contrary to this natural method,—so far as we do in reality try to produce effects of sketching in wood, and of finish in metal,—our work is wrong.

Those apparently careless and free sketches on the wood ought to have been stern and deliberate; those exquisitely toned and finished engravings on metal ought to have looked, instead, like free ink sketches on white paper. That is the theorem which I propose to you for consideration, and which, in the two branches of its assertion, I hope to prove to you; the first part of it, (that wood-cutting should be careful,) in this present lecture; the second, (that metal-cutting should be, at least in a far greater degree than it is now, slight, and free,) in the following one.

79. Next, observe the distinction in respect of *thickness*, no less than number, of lines which may properly be used in the two methods.

In metal engraving, it is easier to lay a fine line than a thick one; and however fine the line may be, it lasts;—but in wood engraving it requires extreme precision and skill to leave a thin dark line, and when left, it will be quickly beaten down by a careless printer. Therefore, the virtue of wood engraving is to exhibit the qualities and power of *thick* lines; and of metal engraving, to exhibit the qualities and power of *thin* ones.

All thin dark lines, therefore, in wood, broadly speaking,

are to be used only in case of necessity ; and thick lines, on metal, only in case of necessity.

80. Though, however, thin *dark* lines cannot easily be produced in wood, thin *light* ones may be struck in an instant. Nevertheless, even thin light ones must not be used, except with extreme caution. For observe, they are equally useless as outline, and for expression of mass. You know how far from exemplary or delightful your boy's first quite voluntary exercises in white line drawing on your slate were? You could, indeed, draw a goblin satisfactorily in such method ;—a round O, with arms and legs to it, and a scratch under two dots in the middle, would answer the purpose ; but if you wanted to draw a pretty face, you took pencil or pen, and paper—not your slate. Now, that instinctive feeling that a white outline is wrong, is deeply founded. For Nature herself draws with diffused light, and concentrated dark ;—never, except in storm or twilight, with diffused dark, and concentrated light ; and the thing we all like best to see drawn—the human face—cannot be drawn with white touches, but by extreme labour. For the pupil and iris of the eye, the eyebrow, the nostril, and the lip are all set in dark on pale ground. You can't draw a white eyebrow, a white pupil of the eye, a white nostril, and a white mouth, on a dark ground. Try it, and see what a spectre you get. But the same number of dark touches, skilfully applied, will give the idea of a beautiful face. And what is true of the subtlest subject you have to represent, is equally true of inferior ones. Nothing lovely can be quickly represented by white touches. You must hew out, if your means are so restricted, the form by sheer labour ; and that both cunning and dextrous. The Florentine masters, and Durer, often practise the achievement, and there are many drawings by the Lippis, Mantegna, and other leading Italian draughtsmen, completed to great perfection with the white line ; but only for the sake of severest study, nor is their work imitable by inferior men. And such studies, however accomplished, always mark a disposition to regard *chiaroscuro* too much, and local colour too little.

We conclude, then, that we must never trust, in wood, to

our power of outline with white ; and our general laws, thus far determined, will be—thick lines in wood ; thin ones in metal ; complete drawing on wood ; sketches, if we choose, on metal.

81. But why, in wood, lines at all ? Why not cut out white *spaces*, and use the chisel as if its incisions were so much white paint ? Many fine pieces of wood-cutting are indeed executed on this principle. Bewick does nearly all his foliage so ; and continually paints the light plumes of his birds with single touches of his chisel, as if he were laying on white.

But this is not the finest method of wood-cutting. It implies the idea of a system of light and shade in which the shadow is totally black. Now, no light and shade can be good, much less pleasant, in which all the shade is stark black. Therefore the finest wood-cutting ignores light and shade, and expresses only form, and *dark local colour*. And it is convenient, for simplicity's sake, to anticipate what I should otherwise defer telling you until next lecture, that fine metal engraving, like fine wood-cutting, ignores light and shade ; and that, in a word, all good engraving whatsoever does so.

82. I hope that my saying so will make you eager to interrupt me. 'What ! Rembrandt's etchings, and Lupton's mezzotints, and Le Keux's line-work,—do you mean to tell us that these ignore light and shade ?'

I never said that *mezzotint* ignored light and shade, or ought to do so. Mezzotint is properly to be considered as chiaroscuro drawing on metal. But I do mean to tell you that both Rembrandt's etchings, and Le Keux's finished line-work, are misapplied labour, in so far as they regard chiaroscuro ; and that consummate engraving never uses it as a primal element of pleasure.

83. We have now got our principles so far defined that I can proceed to illustration of them by example.

Here are facsimiles, very marvellous ones,* of two of the

* By Mr. Burgess. The toil and skill necessary to produce a facsimile of this degree of precision will only be recognized by the reader who has had considerable experience of actual work.

Best wood engravings ever produced by art,—two subjects in Holbein's Dance of Death. You will probably like best that I should at once proceed to verify my last and most startling statement, that fine engraving disdained chiaroscuro.

This vignette (Fig. 2) represents a sunset in the open mountainous fields of southern Germany. And Holbein is so entirely careless about the light and shade, which a Dutchman would first have thought of, as resulting from the sunset, that, as he works, he forgets altogether where his light comes from. Here, actually, the shadow of the figure is cast from the side, right across the picture, while the sun is in front. And there is not the slightest attempt to indicate gradation of light in the sky, darkness in the forest, or any other positive element of chiaroscuro.

This is not because Holbein cannot give chiaroscuro if he chooses. He is twenty times a stronger master of it than Rembrandt; but he, therefore, knows exactly when and how to use it; and that wood engraving is not the proper means for it. The quantity of it which is needful for his story, and will not, by any sensational violence, either divert, or vulgarly enforce, the attention, he will give; and that with an unrivalled subtlety. Therefore I must ask you for a moment or two to quit the subject of technics, and look what these two woodcuts mean.

84. The one I have first shown you is of a ploughman ploughing at evening. It is Holbein's object, here, to express the diffused and intense light of a golden summer sunset, so far as is consistent with grander purposes. A modern French or English chiaroscurist would have covered his sky with fleecy clouds, and relieved the ploughman's hat and his horses against it in strong black, and put sparkling touches on the furrows and grass. Holbein scornfully casts all such tricks aside; and draws the whole scene in pure white, with simple outlines.

85. And yet, when I put it beside this second vignette, (Fig. 3), which is of a preacher preaching in a feebly-lighted church, you will feel that the diffused warmth of the one subject, and diffused twilight in the other, are complete; and

they will finally be to you more impressive than if they had been wrought out with every superficial means of effect, on each block.

For it is as a symbol, not as a scenic effect, that in each case the chiaroscuro is given. Holbein, I said, is at the head of the painter-reformers, and his Dance of Death is the most energetic and telling of all the forms given, in this epoch, to the *Rationalist* spirit of reform, preaching the new Gospel of Death,—“It is no matter whether you are priest or layman, what you believe, or what you do : here is the end.” You shall see, in the course of our inquiry, that Botticelli, in like manner, represents the *Faithful* and *Catholic* temper of reform.

86. The teaching of Holbein is therefore always melancholy,—for the most part purely rational ; and entirely furious in its indignation against all who, either by actual injustice in this life, or by what he holds to be false promise of another, destroy the good, or the energy, of the few days which man has to live. Against the rich, the luxurious, the Pharisee, the false lawyer, the priest, and the unjust judge, Holbein uses his fiercest mockery ; but he is never himself unjust ; never caricatures or equivocates ; gives the facts as he knows them, with explanatory symbols, few and clear.

87. Among the powers which he hates, the pathetic and ingenious preaching of untruth is one of the chief ; and it is curious to find his biographer, knowing this, and reasoning, as German critics nearly always do, from acquired knowledge, not perception, imagine instantly that he sees hypocrisy in the face of Holbein's preacher. “How skilfully,” says Dr. Woltmann, “is the preacher propounding his doctrines ; how thoroughly is his hypocrisy expressed in the features of his countenance, and in the gestures of his hands.” But look at the cut yourself, candidly. I challenge you to find the slightest trace of hypocrisy in either feature or gesture. Holbein knew better. It is not the hypocrite who has power in the pulpit. It is the *sincere* preacher of untruth who does mischief there. The hypocrite's place of power is in trade, or in general society ; none but the sincere ever get fatal influence

in the pulpit. This man is a refined gentleman—ascetic, earnest, thoughtful, and kind. He scarcely uses the vantage even of his pulpit,—comes aside out of it, as an eager man would, pleading; he is intent on being understood—*is* understood; his congregation are delighted—you might hear a pin drop among them: one is asleep indeed, who cannot see him, (being under the pulpit,) and asleep just because the teacher is as gentle as he is earnest, and speaks quietly.

88. How are we to know, then, that he speaks in vain? First, because among all his hearers you will not find one shrewd face. They are all either simple or stupid people: there is one nice woman in front of all, (else Holbein's representation had been caricature,) but she is not a shrewd one.

Secondly, by the light and shade. The church is not in extreme darkness—far from that; a grey twilight is over everything, but the sun is totally shut out of it;—not a ray comes in even at the window—*that* is darker than the walls, or vault.

Lastly, and chiefly, by the mocking expression of Death. Mocking, but not angry. The man has been preaching what he thought true. Death laughs at him, but is not indignant with him.

Death comes quietly: *I am going to be preacher now; here is your own hour-glass, ready for me. You have spoken many words in your day. But "of the things which you have spoken, this is the sum,"—your death-warrant, signed and sealed. There's your text for to-day.*

89. Of this other picture, the meaning is more plain, and far more beautiful. The husbandman is old and gaunt, and has past his days, not in speaking, but pressing the iron into the ground. And the payment for his life's work is, that he is clothed in rags, and his feet are bare on the clods; and he has no hat—but the brim of a hat only, and his long, unkempt grey hair comes through. But all the air is full of warmth and of peace; and, beyond his village church, there is, at last, light indeed. His horses lag in the furrow, and his own limbs totter and fail: but one comes to help him. 'It is a long field,' says Death; 'but we'll get to the end of it to-day, —you and I.'

so thick, so far from the next,—that it shall begin here, and stop there. And he is deliberately assigning the utmost quantity of meaning to it, that a line will carry.

93. It is not fair, however, to compare common work of one age with the best of another. Here is a woodcut of Tenniel's, which I think contains as high qualities as it is possible to find in modern art.* I hold it as beyond others fine, because there is not the slightest caricature in it. No face, no attitude, is pushed beyond the degree of natural humour they would have possessed in life; and in precision of momentary expression, the drawing is equal to the art of any time, and shows power which would, if regulated, be quite adequate to producing an immortal work.

94. Why, then, is it *not* immortal? You yourselves, in compliance with whose demand it was done, forgot it the next week. It will become historically interesting; but no man of true knowledge and feeling will ever keep this in his cabinet of treasure, as he does these woodcuts of Holbein's.

The reason is that this is base coin,—alloyed gold. There is gold in it, but also a quantity of brass and lead—wilfully added—to make it fit for the public. Holbein's is beaten gold, seven times tried in the fire. Of which commonplace but useful metaphor the meaning here is, first, that to catch the vulgar eye a quantity of,—so-called,—light and shade is added by Tenniel. It is effective to an ignorant eye, and is ingeniously disposed; but it is entirely conventional and false, unendurable by any person who knows what *chiaroscuro* is.

Secondly, for one line that Holbein lays, Tenniel has a dozen. There are, for instance, a hundred and fifty-seven lines in Sir Peter Teazle's wig, without counting dots and slight cross-hatching;—but the entire face and flowing hair of Holbein's preacher are done with forty-five lines, all told.

95. Now observe what a different state of mind the two artists must be in on such conditions;—one, never in a hurry, never doing anything that he knows is wrong; never doing a line badly that he can do better; and appealing only to the

* John Bull as Sir Oliver Surface, with Sir Peter Teazle and Joseph Surface. It appeared in *Punch*, early in 1863.

feelings of sensitive persons, and the judgment of attentive ones. That is Holbein's habit of soul. What is the habit of soul of every modern engraver? Always in a hurry; everywhere doing things which he knows to be wrong—(Tenniel knows his light and shade to be wrong as well as I do)—continually doing things badly which he was able to do better; and appealing exclusively to the feelings of the dull, and the judgment of the inattentive.

Do you suppose that is not enough to make the difference between mortal and immortal art,—the original genius being supposed alike in both? *

96. Thus far of the state of the artist himself. I pass next to the relation between him and his subordinate, the wood-cutter.

The modern artist requires him to cut a hundred and fifty-seven lines in the wig only,—the old artist requires him to cut forty-five for the face, and long hair, altogether. The actual proportion is roughly, and on the average, about one to twenty of cost in manual labour, ancient to modern,—the twentieth part of the mechanical labour, to produce an immortal instead of a perishable work,—the twentieth part of the labour; and—which is the greatest difference of all—that twentieth part, at once less mechanically difficult, and more mentally pleasant. Mr. Otley, in his general History of Engraving, says, "The greatest difficulty in wood engraving occurs in clearing out the minute quadrangular lights;" and in any modern woodcut you will see that where the lines of the drawing cross each other to produce shade, the white interstices are cut out so neatly that there is no appearance of any jag or break in the lines; they look exactly as if they had been drawn with a pen. It is chiefly difficult to cut the pieces clearly out when the lines cross at right angles; easier when they form oblique or diamond-shaped interstices; but

* In preparing these passages for the press, I feel perpetual need of qualifications and limitations, for it is impossible to surpass the humour, or precision of expressional touch, in the really golden parts of Tenniel's works; and they *may* be immortal, as representing what is best in their day.

in any case, some half-dozen cuts, and in square crossings as many as twenty, are required to clear one interstice. Therefore if I carelessly draw six strokes with my pen across other six, I produce twenty-five interstices, each of which will need at least six—perhaps twenty, careful touches of the burin to clear out.—Say ten for an average ; and I demand two hundred and fifty exquisitely precise touches from my engraver, to render ten careless ones of mine.

97. Now I take up Punch, at his best. The whole of the left side of John Bull's waistcoat—the shadow on his knee-breeches and great-coat—the whole of the Lord Chancellor's gown, and of John Bull's and Sir Peter Teazle's complexions, are worked with finished precision of cross-hatching. These have indeed some purpose in their texture ; but in the most wanton and gratuitous way, the wall below the window is cross-hatched too, and that not with a double, but a treble line, Fig. 4.



FIG. 4.

There are about thirty of these columns, with thirty-five interstices each : approximately, 1,050—certainly not fewer—interstices to be deliberately cut clear, to get that two inches square of shadow.

Now calculate—or think enough to feel the impossibility of calculating—the number of woodcuts used daily for our popular prints, and how many men are night and day cutting 1,050 square holes to the square inch, as the occupation of their manly life. And Mrs. Beecher Stowe and the North Americans fancy they have abolished slavery !

98. The workman cannot have even the consolation of pride ; for his task, even in its finest accomplishment, is not really difficult,—only tedious. When you have once got into the practice, it is as easy as lying. To cut regular holes *without* a purpose is easy enough ; but to cut *irregular* holes *with* a purpose, that is difficult, for ever ;—no tricks of tool or trade will give you power to do that.

The supposed difficulty—the thing which, at all events, it takes time to learn, is to cut the interstices neat, and each

might have been the making of a Holbein, or nearly a Holbein, in him. I do not know ; but I can turn from his work to that of a man who was not trained at all, and who was, without training, Holbein's equal.

Equal, in the sense that this brown stone, in my left hand, is the equal, though not the likeness, of that in my right. They are both of the same true and pure crystal ; but the one is brown with iron, and never touched by forming hand ; the other has never been in rough companionship, and has been exquisitely polished. So with these two men. The one was the companion of Erasmus and Sir Thomas More. His father was so good an artist that you cannot always tell their drawings asunder. But the other was a farmer's son ; and learned his trade in the back shops of Newcastle.

Yet the first book I asked you to get was his biography ; and in this frame are set together a drawing by Hans Holbein, and one by Thomas Bewick. I know which is most scholarly ; but I do *not* know which is best.

101. It is much to say for the self-taught Englishman ;—yet do not congratulate yourselves on his simplicity. I told you, a little while since, that the English nobles had left the history of birds to be written, and their spots to be drawn, by a printer's lad ;—but I did not tell you their farther loss in the fact that this printer's lad could have written their own histories, and drawn their own spots, if they had let him. But they had no history to be written ; and were too closely maculate to be portrayed ;—white ground in most places altogether obscured. Had there been Mores and Henrys to draw, Bewick could have drawn them ; and would have found his function. As it was, the nobles of his day left him to draw the frogs, and pigs, and sparrows—of his day, which seemed to him, in his solitude, the best types of its Nobility. No sight or thought of beautiful things was ever granted him ;—no heroic creature, goddess-born—how much less any native Deity—ever shone upon him. To his utterly English mind, the straw of the sty, and its tenantry, were abiding truth ;—the cloud of Olympus, and its tenantry, a child's dream. He could draw a pig, but not an Aphrodite.



A.



B.



C.

PLATE L.—THINGS CELESTIAL AND TERRESTRIAL.

As apparent to the English Mind.



the fable of the Frogs and the Stork.* He is, as I told you, as stout a reformer as Holbein, or Botticelli, or Luther, or Savonarola; and, as an impartial reformer, hits right and left, at lower or upper classes, if he sees them wrong. Most frequently, he strikes at vice without reference to class; but in this vignette he strikes definitely at the degradation of the viler popular mind which is incapable of being governed, because it cannot understand the nobleness of kingship. He has written—better than written, engraved, sure to suffer no slip of type—his legend under the drawing; so that we know his meaning:

“Set them up with a king, indeed!”

106. There is an audience of seven frogs, listening to a speaker, or croaker, in the middle; and Bewick has set himself to show in all, but especially in the speaker, essential frogginess of mind—the marsh temper. He could not have done it half so well in painting as he has done by the abstraction of wood-outline. The characteristic of a manly mind, or body, is to be gentle in temper, and firm in constitution; the contrary essence of a froggy mind and body is to be angular in temper, and flabby in constitution. I have enlarged Bewick's orator-frog for you, Plate I, c., and I think you will feel that he is entirely expressed in those essential particulars.

This being perfectly good woodcutting, notice especially its deliberation. No scrawling or scratching, or cross-hatching, or ‘free’ work of any sort. Most deliberate laying down of solid lines and dots, of which you cannot change one. The real difficulty of wood engraving is to cut every one of these black lines or spaces of the exactly right shape, and not at all to cross-hatch them cleanly.

107. Next, examine the technical treatment of the pig, above. I have purposely chosen this as an example of a white object on dark ground, and the frog as a dark object on light ground, to explain to you what I mean by saying that fine engraving regards local colour, but not light and shade. You see both frog and pig are absolutely without light and shade. The frog, indeed, casts a shadow; but his hind leg is as white as his

* From Bewick's *Æsop's Fables*.

eral character of a frog it is to have a hump-back,—not at the shoulders, but the loins.

111. Here, then, is a case in which you will see the exact function that anatomy should take in art.

All the most scientific anatomy in the world would never have taught Bewick, much less you, how to draw a frog.

But when once you *have* drawn him, or looked at him, so as to know his points, it then becomes entirely interesting to find out *why* he has a hump-back. So I went myself yesterday to Professor Rolleston for a little anatomy, just as I should have gone to Professor Phillips for a little geology; and the Professor brought me a fine little active frog; and we put him on the table, and made him jump all over it, and then the Professor brought in a charming Squelette of a frog, and showed me that he needed a projecting bone from his rump, as a bird needs it from his breast,—the one to attach the strong muscles of the hind legs, as the other to attach those of the fore-legs or wings. So that the entire leaping power of the frog is in his hump-back, as the flying power of the bird is in its breastbone. And thus this Frog Parliament is most literally a Rump Parliament—everything depending on the hind legs, and nothing on the brains; which makes it wonderfully like some other Parliaments we know of nowadays, with Mr. Ayrton and Mr. Lowe for their æsthetic and acquisitive eyes, and a rump of Railway Directors.

112. Now, to conclude, for want of time only—I have but touched on the beginning of my subject,—understand clearly and finally this simple principle of all art, that the best is that which realizes absolutely, if possible. Here is a viper by Carpaccio: you are afraid to go near it. Here is an arm-chair by Carpaccio: you who came in late, and are standing, to my regret, would like to sit down in it. This is consummate art; but you can only have that with consummate means, and exquisitely trained and hereditary mental power.

With inferior means, and average mental power, you must be content to give a rude abstraction; but if rude abstraction is to be made, think what a difference there must be between a wise man's and a fool's; and consider what heavy responsi-

bility lies upon you in your youth, to determine, among realities, by what you will be delighted, and, among imaginations, by whose you will be led.

LECTURE IV.

THE TECHNICS OF METAL ENGRAVING.

113. We are to-day to examine the proper methods for the technical management of the most perfect of the arms of precision possessed by the artist. For you will at once understand that a line cut by a finely-pointed instrument upon the smooth surface of metal is susceptible of the utmost fineness that can be given to the *definite* work of the human hand. In drawing with pen upon paper, the surface of the paper is slightly rough; necessarily, two points touch it instead of one, and the liquid flows from them more or less irregularly, whatever the draughtsman's skill. But you cut a metallic surface with one edge only; the furrow drawn by a skater on the surface of ice is like it on a large scale. Your surface is polished, and your line may be wholly faultless, if your hand is.

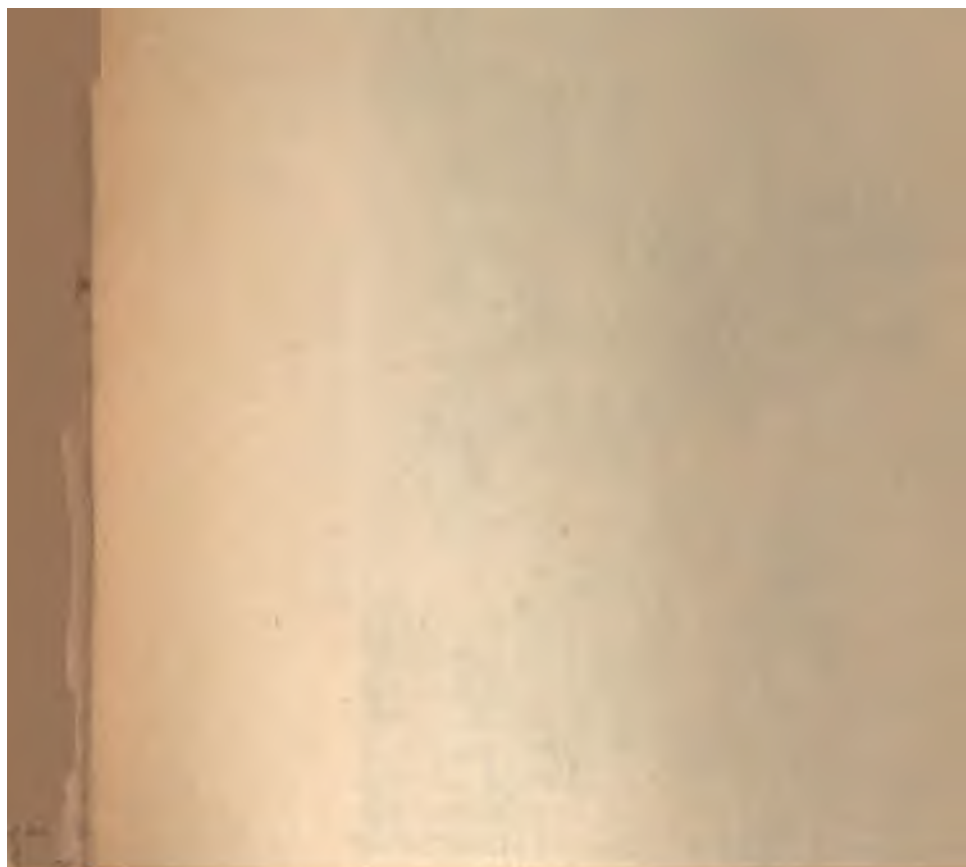
114. And because, in such material, effects may be produced which no penmanship could rival, most people, I fancy, think that a steel plate half engraves itself; that the workman has no trouble with it, compared to that of a pen draughtsman.

To test your feeling in this matter accurately, here is a manuscript book written with pen and ink, and illustrated with flourishes and vignettes.

You will all, I think, be disposed, on examining it, to exclaim, How wonderful! and even to doubt the possibility of every page in the book being completed in the same manner. Again, here are three of my own drawings, executed with the pen, and Indian ink, when I was fifteen. They are copies from large lithographs by Prout; and I imagine that most of my pupils would think me very tyrannical if I requested them



PLATE II.—THE STAR OF FLORENCE.



to do anything of the kind themselves. And yet, when you see in the shop windows a line engraving like this,* or this,* either of which contains, alone, as much work as fifty pages of the manuscript book, or fifty such drawings as mine, you look upon its effect as quite a matter of course,—you never say ‘how wonderful’ *that* is, nor consider how you would like to have to live, by producing anything of the same kind yourselves.

115. Yet you cannot suppose it is in reality easier to draw a line with a cutting point, not seeing the effect at all, or, if any effect, seeing a gleam of light instead of darkness, than to draw your black line at once on the white paper? You cannot really think † that there is something complacent, sympathetic, and helpful in the nature of steel; so that while a pen-and-ink sketch may always be considered an achievement proving cleverness in the sketcher, a sketch on steel comes out by a mere favour of the indulgent metal; or that the plate is woven like a piece of pattern silk, and the pattern is developed by pasteboard cards punched full of holes? Not so. Look close at this engraving, or take a smaller and simpler one, Turner’s Mercury and Argus,—imagine it to be a drawing in pen and ink, and yourself required similarly to produce its parallel! True, the steel point has the one advantage of not blotting, but it has tenfold or twentyfold disadvantage, in that you cannot slur, nor efface, except in a very resolute and laborious way, nor play with it, nor even see what you are doing with it at the moment, far less the effect that is to be. You must *feel* what you are doing with it, and know precisely what you have got to do; how deep, how broad, how far apart your lines must be, etc. and etc., (a couple of lines of etceteras would not be enough to imply all you must know). But suppose the plate *were* only a pen drawing: take your pen—your

* Miller’s large plate of the Grand Canal, Venice, after Turner; and Goodall’s, of Tivoli, after Turner. The other examples referred to are left in the University Galleries.

† This paragraph was not read at the lecture, time not allowing:—it is part of what I wrote on engraving some years ago, in the papers for the Art Journal, called the Cestus of Aglaia.

finest—and just try to copy the leaves that entangle the head of Io, and her head itself; remembering always that the kind of work required here is mere child's play compared to that of fine figure engraving. Nevertheless, take a small magnifying glass to this—count the dots and lines that gradate the nostrils and the edges of the facial bone; notice how the light is left on the top of the head by the stopping, at its outline, of the coarse touches which form the shadows under the leaves; examine, it well, and then—I humbly ask of you—try to do a piece of it yourself! You clever sketcher—you young lady or gentleman of genius—you eye-glassed dilettante—you current writer of criticism royally plural,—I beseech you,—do it yourself; do the merely etched outline yourself, if no more. Look you,—you hold your etching needle this way, as you would a pencil, nearly; and then,—you scratch with it! it is as easy as lying. Or if you think that too difficult, take an easier piece;—take either of the light sprays of foliage that rise against the fortress on the right, pass your lens over them—look how their fine outline is first drawn, leaf by leaf; then how the distant rock is put in between, with broken lines, mostly stopping before they touch the leaf-outline; and again, I pray you, do it yourself,—if not on that scale, on a larger. Go on into the hollows of the distant rock,—traverse its thickets,—number its towers;—count how many lines there are in a laurel bush—in an arch—in a casement; some hundred and fifty, or two hundred, deliberately drawn lines, you will find, in every square quarter of an inch;—say *three thousand to the inch*,—each, with skilful intent, put in its place! and then consider what the ordinary sketcher's work must appear, to the men who have been trained to this!

116. “But might not more have been done by three thousand lines to a square inch?” you will perhaps ask. Well, possibly. It may be with lines as with soldiers: three hundred, knowing their work thoroughly, may be stronger than three thousand less sure of their aim. We shall have to press close home this question about numbers and purpose presently;—it is not the question now. Suppose certain results required,—atmospheric effects, surface textures, transparent

cies of shade, confusions of light,—then, more could *not* be done with less. There are engravings of this modern school, of which, with respect to their particular aim, it may be said, most truly, they “cannot be better done.”

Here is one just finished,—or, at least, finished to the eyes of ordinary mortals, though its fastidious master means to retouch it ;—a quite pure line engraving, by Mr. Charles Henry Jeens ; (in calling it pure line, I mean that there are no mixtures of mezzotint or any mechanical tooling, but all is steady hand-work,) from a picture by Mr. Armytage, which, without possessing any of the highest claims to admiration, is yet free from the vulgar vices which disgrace most of our popular religious art ; and is so sweet in the fancy of it as to deserve, better than many works of higher power, the pains of the engraver to make it a common possession. It is meant to help us to imagine the evening of the day when the father and mother of Christ had been seeking him through Jerusalem : they have come to a well where women are drawing water ; St. Joseph passes on,—but the tired Madonna, leaning on the well’s margin, asks wistfully of the women if they have seen such and such a child astray. Now will you just look for a while into the lines by which the expression of the weary and anxious face is rendered ; see how unerring they are,—how calm and clear ; and think how many questions have to be determined in drawing the most minute portion of any one,—its curve,—its thickness,—its distance from the next,—its own preparation for ending, invisibly, where it ends. Think what the precision must be in these that trace the edge of the lip, and make it look quivering with disappointment, or in these which have made the eyelash heavy with restrained tears.

117. Or if, as must be the case with many of my audience, it is impossible for you to conceive the difficulties here overcome, look merely at the draperies, and other varied substances represented in the plate ; see how silk, and linen, and stone, and pottery, and flesh, are all separated in texture, and gradated in light, by the most subtle artifices and appliances of line,—of which artifices, and the nature of the mechanical

labour throughout, I must endeavour to give you to-day a more distinct conception than you are in the habit of forming. But as I shall have to blame some of these methods in their general result, and I do not wish any word of general blame to be associated with this most excellent and careful plate by Mr. Jeens, I will pass, for special examination, to one already in your reference series, which for the rest exhibits more various treatment in its combined landscape, background, and figures; the *Belle Jardinière* of Raphael, drawn and engraved by the Baron Desmoyers.

You see, in the first place, that the ground, stones, and other coarse surfaces are distinguished from the flesh and draperies by broken and wriggled lines. Those broken lines cannot be executed with the burin, they are etched in the early states of the plate, and are a modern artifice, never used by old engravers; partly because the older men were not masters of the art of etching, but chiefly because even those who were acquainted with it would not employ lines of this nature. They have been developed by the importance of landscape in modern engraving, and have produced some valuable results in small plates, especially of architecture. But they are entirely erroneous in principle, for the surface of stones and leaves is not broken or jagged in this manner, but consists of mossy, or blooming, or otherwise organic texture, which cannot be represented by these coarse lines; their general consequence has therefore been to withdraw the mind of the observer from all beautiful and tender characters in foreground, and eventually to destroy the very school of landscape engraving which gave birth to them.

Considered, however, as a means of relieving more delicate textures, they are in some degree legitimate, being, in fact, a kind of chasing or jaggling one part of the plate surface in order to throw out the delicate tints from the rough field. But the same effect was produced with less pains, and far more entertainment to the eye, by the older engravers, who employed purely ornamental variations of line; thus in Plate IV., opposite page 87, the drapery is sufficiently distinguished from the grass by the treatment of the latter as an

ornamental arabesque. The grain of wood is elaborately engraved by Marc Antonio, with the same purpose, in the plate given in your Standard Series.

118. Next, however, you observe what difference of texture and force exists between the smooth, continuous lines themselves, which are all really *engraved*. You must take some pains to understand the nature of this operation.

The line is first cut lightly through its whole course, by absolute decision and steadiness of hand, which you may endeavour to imitate if you like, in its simplest phase, by drawing a circle with your compass-pen; and then, grasping your penholder so that you can push the point like a plough, describing other circles inside or outside of it, in exact parallelism with the mathematical line, and at exactly equal distances. To approach, or depart, with your point at finely graduated intervals, may be your next exercise, if you find the first unexpectedly easy.

119. When the line is thus described in its proper course, it is ploughed deeper, where depth is needed, by a second cut of the burin, first on one side, and then on the other, the cut being given with graduated force so as to take away most steel where the line is to be darkest. Every line of graduated depth in the plate has to be thus cut eight or ten times over at least, with retouchings to smooth and clear all in the close. Jason has to plough his field ten-furrow deep, with his fiery oxen well in hand, all the while.

When the essential lines are thus produced, in their several directions, those which have been drawn across each other, so as to give depth of shade, or richness of texture, have to be farther enriched by dots in the interstices; else there would be a painful appearance of network everywhere; and these dots require each four or five jags to produce them; and each of these jags must be done with what artists and engravers alike call 'feeling,'—the sensibility, that is, of a hand completely under mental government. So wrought, the dots look soft, and like touches of paint; but mechanically dug in, they are vulgar and hard.

120. Now, observe, that, for every piece of shadow through-

out the work, the engraver has to decide with what quantity and kind of line he will produce it. Exactly the same quantity of black, and therefore the same depth of tint in general effect, may be given with six thick lines; or with twelve, of half their thickness; or with eighteen, of a third of the thickness. The second six, second twelve, or second eighteen, may cross the first six, first twelve, or first eighteen, or go between them; and they may cross at any angle. And then the third six may be put between the first six, or between the second six, or across both, and at any angle. In the net-work thus produced, any kind of dots may be put in the severally shaped interstices. And for any of the series of superadded lines, dots, of equivalent value in shade, may be substituted. (Some engravings are wrought in dots altogether.) Choice infinite, with multiplication of infinity, is, at all events, to be made, for every minute space, from one side of the plate to the other.

121. The excellence of a beautiful engraving is primarily in the use of these resources to exhibit the qualities of the original picture, with delight to the eye in the method of translation; and the language of engraving, when once you begin to understand it, is, in these respects, so fertile, so ingenious, so ineffably subtle and severe in its grammar, that you may quite easily make it the subject of your life's investigation, as you would the scholarship of a lovely literature.

But in doing this, you would withdraw, and necessarily withdraw, your attention from the higher qualities of art, precisely as a grammarian, who is that, and nothing more, loses command of the matter and substance of thought. And the exquisitely mysterious mechanisms of the engraver's method have, in fact, thus entangled the intelligence of the careful draughtsmen of Europe; so that since the final perfection of this translator's power, all the men of finest patience and finest hand have stayed content with it;—the subtlest draughtsmanship has perished from the canvas,* and sought

* An effort has lately been made in France, by Meissonier, Gérôme, and their school, to recover it, with marvellous collateral skill of engravers. The etching of Gérôme's Louis XVI. and Molière is one of the completest pieces of skilful mechanism ever put on metal.

more popular praise in this labyrinth of disciplined language, and more or less dulled or degraded thought. And, in sum, I know no cause more direct or fatal, in the destruction of the great schools of European art, than the perfectness of modern line engraving.

122. This great and profoundly to be regretted influence I will prove and illustrate to you on another occasion. My object to-day is to explain the perfectness of the art itself; and above all to request you, if you will not look at pictures instead of photographs, at least not to allow the cheap merits of the chemical operation to withdraw your interest from the splendid human labour of the engraver. Here is a little vignette from Stothard, for instance, in Rogers' poems, to the lines,

"Soared in the swing, half pleased and half afraid,
'Neath sister elms, that waved their summer shade."

You would think, would you not? (and rightly,) that of all difficult things to express with crossed black lines and dots, the face of a young girl must be the most difficult. Yet here you have the face of a bright girl, radiant in light, transparent, mysterious, almost breathing,—her dark hair involved in delicate wreath and shade, her eyes full of joy and sweet playfulness,—and all this done by the exquisite order and gradation of a very few lines, which, if you will examine them through a lens, you find dividing and chequering the lip, and cheek, and chin, so strongly that you would have fancied they could only produce the effect of a grim iron mask. But the intelligences of order and form guide them into beauty; and inflame them with delicatest life.

123. And do you see the size of this head? About as large as the bud of a forget-me-not! Can you imagine the fineness of the little pressures of the hand on the steel, in that space, which at the edge of the almost invisible lip, fashioned its less or more of smile.

My chemical friends, if you wish ever to know anything rightly concerning the arts, I very urgently advise you to throw all your vials and washes down the gutter-trap; and if you will ascribe, as you think it so clever to do, in your

the mechanical furrow as to accept it for final excellence. The engraving is full of the painter's higher power and wider perception ; it is classically perfect, because duly subordinate, and presenting for your applause only the virtues proper to its own sphere. Among these, I must now reiterate, the first of all is the *decorative* arrangement of *lines*.

126. You all know what a pretty thing a damask table-cloth is, and how a pattern is brought out by threads running one way in one space, and across in another. So, in lace, a certain delightfulness is given by the texture of meshed lines.

Similarly, on any surface of metal, the object of the engraver is, or ought to be, to cover it with lovely *lines*, forming a lacework, and including a variety of spaces, delicious to the eye.

And this is his business, primarily ; before any other matter can be thought of, his work must be ornamental. You know I told you a sculptor's business is first to cover a surface with pleasant *bosses*, whether they mean anything or not ; so an engraver's is to cover it with pleasant *lines* whether they mean anything or not. That they should mean something, and a good deal of something, is indeed desirable afterwards ; but first we must be ornamental.

127. Now if you will compare Plate II. at the beginning of this lecture, which is a characteristic example of good Florentine engraving, and represents the Planet and power of Aphrodite, with the Aphrodite of Bewick in the upper division of Plate I., you will at once understand the difference between a primarily ornamental, and a primarily realistic, style. The first requirement in the Florentine work, is that it shall be a lovely arrangement of lines ; a pretty thing upon a page. Bewick has a secondary notion of making his vignette a pretty thing upon a page. But he is overpowered by his vigorous veracity, and bent first on giving you his idea of Venus. Quite right, he would have been, mind you, if he had been carving a statue of her on Mount Eryx ; but not when he was engraving a vignette to Æsop's fables. To engrave well is to ornament a surface well, not to create a realistic impression. I beg your pardon for my repetitions ; but the point at issue is the



PLATE III.—AT EVENING, FROM THE TOP OF FÉSOLE.

root of the whole business, and I *must* get it well asserted, and variously.

Let me pass to a more important example.

128. Three years ago, in the rough first arrangement of the copies in the Educational Series, I put an outline of the top of Apollo's sceptre, which, in the catalogue, was said to be probably by Baccio Bandini of Florence, for your first real exercise; it remains so, the olive being put first only for its mythological rank.

The series of engravings to which the plate from which that exercise is copied belongs, are part of a number, executed chiefly, I think, from early designs of Sandro Botticelli, and some in great part by his hand. He and his assistant, Baccio, worked together; and in such harmony, that Bandini probably often does what Sandro wants, better than Sandro could have done it himself; and, on the other hand, there is no design of Bandini's over which Sandro does not seem to have had influence.

And wishing now to show you three examples of the finest work of the old, the renaissance, and the modern schools,—of the old, I will take Baccio Bandini's *Astrologia*, Plate III., opposite. Of the renaissance, Durer's Adam and Eve. And of the modern, this head of the daughter of Herodias, engraved from Luini by Beaugrand, which is as affectionately and sincerely wrought, though in the modern manner, as any plate of the old schools.

129. Now observe the progress of the feeling for light and shade in the three examples.

The first is nearly all white paper; you think of the outline as the constructive element throughout.

The second is a vigorous piece of *white* and *black*—not of *light* and *shade*,—for all the high lights are equally white, whether of flesh, or leaves, or goat's hair.

The third is complete in *chiaroscuro*, as far as engraving can be.

Now the dignity and virtue of the plates is in the exactly inverse ratio of their fulness in *chiaroscuro*.

Bandini's is excellent work, and of the very highest school.

Durer's entirely accomplished work, but of an inferior school. And Beaugrand's, excellent work, but of a vulgar and non-classical school.

And these relations of the schools are to be determined by the quality in the *lines*; we shall find that in proportion as the light and shade is neglected, the lines are studied; that those of Bandini are perfect; of Durer perfect, only with a lower perfection; but of Beaugrand, entirely faultful.

130. I have just explained to you that in modern engraving the lines are cut in clean furrow, widened, it may be, by successive cuts; but, whether it be fine or thick, retaining always, when printed, the aspect of a continuous line drawn with the pen, and entirely black throughout its whole course.

Now we may increase the delicacy of this line to any extent by simply printing it in grey colour instead of black. I obtained some very beautiful results of this kind in the later volumes of 'Modern Painters,' with Mr. Armytage's help, by using subdued purple tints; but, in any case, the line thus engraved must be monotonous in its character, and cannot be expressive of the finest qualities of form.

Accordingly, the old Florentine workmen constructed the line *itself*, in important places, of successive minute touches, so that it became a chain of delicate links which could be opened or closed at pleasure.* If you will examine through a lens the outline of the face of this Astrology, you will find it is traced with an exquisite series of minute touches, susceptible of accentuation or change absolutely at the engraver's pleasure; and, in result, corresponding to the finest conditions of a pencil line drawing by a consummate master. In the fine plates of this period, you have thus the united powers of the pen and pencil, and both absolutely secure and multipliable.

* The method was first developed in engraving designs on silver—numbers of lines being executed with dots by the punch, for variety sake. For niello, and printing, a transverse cut was substituted for the blow. The entire style is connected with the later Roman and Byzantine method of drawing lines with the drill hole, in marble. See above, Lecture II., Section 70.

131. I am a little proud of having independently discovered, and had the patience to carry out, this Florentine method of execution for myself, when I was a boy of thirteen. My good drawing-master had given me some copies calculated to teach me freedom of hand; the touches were rapid and vigorous,—many of them in mechanically regular zigzags, far beyond any capacity of mine to imitate in the bold way in which they were done. But I was resolved to have them, somehow; and actually facsimiled a considerable portion of the drawing in the Florentine manner, with the finest point I could cut to my pencil, taking a quarter of an hour to forge out the likeness of one return in the zigzag which my master carried down through twenty returns in two seconds; and so successfully, that he did not detect my artifice till I showed it him,—on which he forbade me ever to do the like again. And it was only thirty years afterwards that I found I had been quite right after all, and working like Baccio Bandini! But the patience which carried me through that early effort, served me well through all the thirty years, and enabled me to analyze, and in a measure imitate, the method of work employed by every master; so that, whether you believe me or not at first, you will find what I tell you of their superiority, or inferiority, to be true.

132. When lines are studied with this degree of care you may be sure the master will leave room enough for you to see them and enjoy them, and not use any at random. All the finest engravers, therefore, leave much white paper, and use their entire power on the outlines.

133. Next to them come the men of the Renaissance schools, headed by Durer, who, less careful of the beauty and refinement of the line, delight in its vigour, accuracy, and complexity. And the essential difference between these men and the moderns is that these central masters cut their line for the most part with a single furrow, giving it depth by force of hand or wrist, and retouching, *not in the furrow itself, but with others beside it*.* Such work can only be done well on copper,

* This most important and distinctive character was pointed out to me by Mr. Burgess.

and it can display all faculty of hand or wrist, precision of eye, and accuracy of knowledge, which a human creature can possess. But the dotted or hatched line is not used in the central style, and the higher conditions of beauty never thought of.

In the Astrology of Bandini,—and remember that the Astrologia of the Florentine meant what we mean by Astronomy, and much more,—he wishes you first to look at the face: the lip half open, faltering in wonder; the amazed, intense, dreaming gaze; the pure dignity of forehead, undisturbed by terrestrial thought. None of these things could be so much as attempted in Durer's method; he can engrave flowing hair, skin of animals, bark of trees, wreathings of metal-work, with the free hand; also, with laboured chiaroscuro, or with sturdy line, he can reach expressions of sadness, or gloom, or pain, or soldierly strength,—but pure beauty,—never.

134. Lastly, you have the Modern school, deepening its lines in successive cuts. The instant consequence of the introduction of this method is the restriction of curvature; you cannot follow a complex curve again with precision through its furrow. If you are a dextrous ploughman, you can drive your plough any number of times along the simple curve. But you cannot repeat again exactly the motions which cut a variable one.* You may retouch it, energize it, and deepen it in parts, but you cannot cut it all through again equally. And the retouching and energizing in parts is a living and intellectual process; but the cutting all through, equally, a mechanical one. The difference is exactly such as that between the dexterity of turning out two similar mouldings from a lathe, and carving them with the free hand, like a Pisan sculptor. And although splendid intellect, and subtlest sensibility, have been spent on the production of some modern plates, the mechanical element introduced by their manner of execution always overpowers both; nor can any plate of consummate value ever be produced in the modern method.

135. Nevertheless, in landscape, there are two examples in your Reference series, of insuperable skill and extreme beauty:

* This point will be further examined and explained in the Appendix.



PLATE IV.—"BY THE SPRINGS OF PARNASSUS."

Miller's plate, before instanced, of the Grand Canal, Venice ; and E. Goodall's of the upper fall of the Tees. The men who engraved these plates might have been exquisite artists ; but their patience and enthusiasm were held captive in the false system of lines, and we lost the painters ; while the engravings, wonderful as they are, are neither of them worth a Turner etching, scratched in ten minutes with the point of an old fork ; and the common types of such elaborate engraving are none of them worth a single frog, pig, or puppy, out of the corner of a Bewick vignette.

136. And now, I think, you cannot fail to understand clearly what you are to look for in engraving, as a separate art from that of painting. Turn back to the 'Astrologia' as a perfect type of the purest school. She is gazing at stars, and crowned with them. But the stars are *black* instead of shining ! You cannot have a more decisive and absolute proof that you must not look in engraving for *chiaroscuro*.

Nevertheless, her body is half in shade, and her left foot ; and she casts a shadow, and there is a bar of shade behind her.

All these are merely so much acceptance of shade as may relieve the forms, and give value to the linear portions. The face, though turned from the light, is shadowless.

Again. Every lock of the hair is designed and set in its place with the subtlest care, but there is no lustre attempted,—no texture,—no mystery. The plumes of the wings are set studiously in their places,—they, also, lustreless. That even their filaments are not drawn, and that the broad curve embracing them ignores the anatomy of a bird's wing, are conditions of design, not execution. Of these in a future lecture.*

137. The 'Poesia,' Plate IV., opposite, is a still more severe, though not so generic, an example ; its decorative foreground reducing it almost to the rank of Goldsmith's ornamentation. I need scarcely point out to you that the flowing water shows neither lustre nor reflection ; but notice that the observer's attention is supposed to be so close to every dark touch of the

* See Appendix, Article I.

graver that he will see the minute dark spots which in the sprinkled shower falling from the vase into the pool.

138. This habit of strict and calm attention, constant in the artist, and expected in the observer, makes all the difference between the art of Intellect, and of mere sensation. Every detail of this plate has a meaning, if you care to stand it. This is Poetry, sitting by the fountain of which flows first out of a formal urn, to show that artless; but the rocks of Parnassus are behind, at the top of them only one tree, like a mushroom with a stalk. You at first are inclined to say, How very few trees on Parnassus! but this one is a mortal Plane Tree, planted by Agamemnon, and connects our Poesia with the Iliad. Then, this is the robe of Poetry,—this is the divine vegetation up under her feet,—this is the heaven and earth power,—this is the fountain of Castalia flowing among the grass,—and these are the drops with which, in a pitcher, Poetry is nourishing the fountain.

All which you may find out if you happen to be about Castalia, or about poetry; and please to put upon, for yourself. But the poor dunces, feeling themselves but 'goffi nell' arte,' have you all this, except suggestively. They cannot go to Parnassus, nor sweet springs so as to be able to make a pretty damasked sun-leaf, and flowing lines, and so leave you to do it—*if you will.*

139. 'But a great many people who more can't; and surely the finished engraving is delightful, and the only means we have of seeing finished pictures, out of our reach.'

Yes, all that is true; and when you see a line engraving upon taste in recent matters; for the present, let us be content with the best work is, and why it is so. I do not now press further my cavils. In line engraving, I must assign to the engraver the work of

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impossible.

Sands, and Dolly Vardens, and the Paddington Station,—these, I think, are typical of your chief demands; the cartoons of Raphael—which you don't care to see themselves; and, by way of a flight into the empyrean, the Madonna di San Sisto. And, literally, there are hundreds of cities and villages in Italy in which roof and wall are blazoned with the noblest divinity and philosophy ever imagined by men; and of all this treasure, I can, as far as I know, give you not *one* example, in line engraving, by an English hand!

Well, you are in the main matter right in this. You want essentially Ramsgate Sands and the Paddington Station, because there you can see yourselves.

Make yourselves, then, worthy to be seen for ever, and let English engraving become noble as the record of English loveliness and honour.

LECTURE V.

DESIGN IN THE GERMAN SCHOOLS OF ENGRAVING.

141. By reference to the close of the preface to 'Eagle's Nest,' you will see, gentlemen, that I meant these lectures, from the first, rather to lead you to the study of the characters of two great men, than to interest you in the processes of a secondary form of art. As I draw my materials into the limited form necessary for the hour, I find my divided purpose doubly failing; and would fain rather use my time to-day in supplying the defects of my last lecture, than in opening the greater subject, which I must treat with still more lamentable inadequacy. Nevertheless, you must not think it is for want of time that I omit reference to other celebrated engravers, and insist on the special power of these two only. Many not inconsiderable reputations are founded merely on the curiosity of collectors of prints, or on partial skill in the management of processes; others, though resting on more secure bases, are still of no importance to you in the general history of art; whereas you will find the work of

Holbein and Botticelli determining for you, without need of any farther range, the principal questions of moment in the relation of the Northern and Southern schools of design. Nay, a wider method of inquiry would only render your comparison less accurate in result. It is only in Holbein's majestic range of capacity, and only in the particular phase of Teutonic life which his art adorned, that the problem can be dealt with on fair terms. We Northerners can advance no fairly comparable antagonist to the artists of the South, except at that one moment, and in that one man. Rubens cannot for an instant be matched with Tintoret, nor Memling with Lippi; while Reynolds only rivals Titian in what he learned from him. But in Holbein and Botticelli we have two men trained independently, equal in power of intellect, similiar in material and mode of work, contemporary in age, correspondent in disposition. The relation between them is strictly typical of the constant aspects to each other of the Northern and Southern schools.

142. Their point of closest contact is in the art of engraving, and this art is developed entirely as the servant of the great passions which perturbed or polluted Europe in the fifteenth century. The impulses which it obeys are all new; and it obeys them with its own nascent plasticity of temper. Painting and sculpture are only modified by them; but engraving is educated.

These passions are in the main three; namely,

1. The thirst for classical literature, and the forms of proud and false tastes which arose out of it, in the position it had assumed as the enemy of Christianity.
2. The pride of science, enforcing (in the particular domain of Art) accuracy of perspective, shade, and anatomy, never before dreamed of.
3. The sense of error and iniquity in the theological teaching of the Christian Church, felt by the highest intellects of the time, and necessarily rendering the formerly submissive religious art impossible.

To-day, then, our task is to examine the peculiar characters of the Design of the Northern Schools of Engraving, as affected by these great influences.

143. I have not often, however, used the word 'design,' and must clearly define the sense in which I now use it. It is vaguely used in common art-parlance; often as if it meant merely the drawing of a picture, as distinct from its colour; and in other still more inaccurate ways. The accurate and proper sense, underlying all these, I must endeavour to make clear to you.

'Design' properly signifies that power in any art-work which has a purpose other than of imitation, and which is 'designed,' composed, or separated to that end. It implies the rejection of some things, and the insistence upon others, with a given object.*

Let us take progressive instances. Here is a group of prettily dressed peasant children, charmingly painted by a very able modern artist—not absolutely without design, for he really wishes to show you how pretty peasant children can be, (and, in so far, is wiser and kinder than Murillo, who likes to show how ugly they can be); also, his group is agreeably arranged, and its component children carefully chosen. Nevertheless, any summer's day, near any country village, you may come upon twenty groups in an hour as pretty as this;

* If you paint a bottle only to amuse the spectator by showing him how like a painting may be to a bottle, you cannot be considered, in art-philosophy, as a designer. But if you paint the cork flying out of the bottle, and the contents arriving in an arch at the mouth of a recipient glass, you are so far forth a designer or signer; probably meaning to express certain ultimate facts respecting, say, the hospitable disposition of the landlord of the house; but at all events representing the bottle and glass in a designed, and not merely natural, manner. Not merely natural—nay, in some sense non-natural, or supernatural. And all great artists show both this fantastic condition of mind in their work, and show that it has arisen out of a communicative or didactic purpose.

They are the Sign-painters of God.

I have added this note to the lecture in copying my memoranda of it here at Assisi, June 9th, being about to begin work in the Tavern, or Tabernaculum, of the Lower Church, with its variously significant four great 'signs.'

and may see—if you have eyes—children in them twenty times prettier than these. A photograph, if it could render them perfectly, and in colour, would far excel the charm of this painting; for in it, good and clever as it is, there is nothing supernatural, and much that is sub-natural.

144. Beside this group of, in every sense of the word, ‘artless’ little country girls, I will now set one—in the best sense of the word—‘artful’ little country girl,—a sketch by Gainsborough.

You never saw her like before. Never will again, now that Gainsborough is dead. No photography,—no science,—no industry, will touch or reach for an instant this *super-naturalness*. You will look vainly through the summer fields for such a child. “Nor up the lawn, nor by the wood,” is she. Whence do you think this marvellous charm has come? Alas! if we knew, would not we all be Gainsboroughs? This only you may practically ascertain, as surely as that a flower will die if you cut its root away, that you cannot alter a single touch in Gainsborough’s work without injury to the whole. Half a dozen spots, more or less, in the printed gowns of these other children whom I first showed you, will not make the smallest difference to them; nor a lock or two more or less in their hair, nor a dimple or two more or less in their cheeks. But if you alter one wave of the hair of Gainsborough’s girl, the child is gone. Yet the art is so subtle, that I do not expect you to believe this. It looks so instinctive, so easy, so ‘chanceux,’—the French word is better than ours. Yes, and in their more accurate sense, also, ‘Il a de la chance.’ A stronger Designer than he was with him. He could not tell you himself how the thing was done.

145. I proceed to take a more definite instance—this Greek head of the Lacinian Juno. The design or appointing of the forms now entirely prevails over the resemblance to Nature. No real hair could ever be drifted into these wild lines, which mean the wrath of the Adriatic winds round the Cape of Storms.

And yet, whether this be uglier or prettier than Gainsborough’s child—(and you know already what *I* think about

it, that no Greek goddess was ever half so pretty as an English girl, of pure clay and temper,)—uglier or prettier, it is more dignified and impressive. It at least belongs to the domain of a lordlier, more majestic, more guiding, and ordaining art.

146. I will go back another five hundred years, and place an Egyptian beside the Greek divinity. The resemblance to Nature is now all but lost, the ruling law has become all. The lines are reduced to an easily counted number, and their arrangement is little more than a decorative sequence of pleasant curves cut in porphyry,—in the upper part of their contour following the outline of a woman's face in profile, over-crested by that of a hawk, on a kind of pedestal. But that the sign-engraver meant by his hawk, Immortality, and by her pedestal, the House or Tavern of Truth, is of little importance now to the passing traveller, not yet preparing to take the sarcophagus for his place of rest.

147. How many questions are suggested to us by these transitions! Is beauty contrary to law, and grace attainable only through license? What we gain in language, shall we lose in thought? and in what we add of labour, more and more forget its ends?

Not so.

Look at this piece of Sandro's work, the Libyan Sibyl.*

It is as ordered and normal as the Egyptian's;—as graceful and facile as Gainsborough's. It retains the majesty of old religion; it is invested with the joy of newly-awakened childhood.

Mind, I do not expect you—do not wish you—to enjoy Botticelli's dark engraving as much as Gainsborough's aerial sketch; for due comparison of the men, painting should be put beside painting. But there is enough even in this copy of the Florentine plate to show you the junction of the two powers in it—of prophecy, and delight.

148. Will these two powers, do you suppose, be united in the same manner in the contemporary Northern art? That Northern school is my subject to-day; and yet I give you, as

* Plate X., Lecture VI.

type of the intermediate condition between Egypt and England—not Holbein, but Botticelli. I am obliged to do this; because in the Southern art, the religious temper remains unconquered by the doctrines of the Reformation. Botticelli was—what Luther wished to be, but could not be—a reformer still believing in the Church: his mind is at peace; and his art, therefore, can pursue the delight of beauty, and yet remain prophetic. But it was far otherwise in Germany. There the Reformation of manners became the destruction of faith; and art therefore, not a prophecy, but a protest. It is the chief work of the greatest Protestant who ever lived,* which I ask you to study with me to-day.

149. I said that the power of engraving had developed itself during the introduction of three new—(practically and vitally new, that is to say)—elements, into the minds of men: elements which briefly may be expressed thus:

1. Classicism, and Literary Science.
2. Medicine, and Physical Science.†
3. Reformation, and Religious Science.

And first of Classicism.

You feel, do not you, in this typical work of Gainsborough's, that his subject as well as his picture is 'artless' in a lovely sense;—nay, not only artless, but ignorant, and unscientific, in a beautiful way? You would be afterwards remorseful, I think, and angry with yourself—seeing the effect produced on her face—if you were to ask this little lady

* I do not mean the greatest teacher of reformed faith; but the greatest protestant against faith unreformed.

† It has become the permitted fashion among modern mathematicians, chemists, and apothecaries, to call themselves 'scientific men,' as opposed to theologians, poets, and artists. They know their sphere to be a separate one; but their ridiculous notion of its being a peculiarly scientific one ought not to be allowed in our Universities. There is a science of Morals, a science of History, a science of Grammar, a science of Music, and a science of Painting; and all these are quite beyond comparison higher fields for human intellect, and require accuracies of intenser observation, than either chemistry, electricity, or geology.

to spell a very long word? Also, if you wished to know how many times the sevens go in forty-nine, you would perhaps wisely address yourself elsewhere. On the other hand, you do not doubt that *this* lady* knows very well how many times the sevens go in forty-nine, and is more Mistress of Arts than any of us are Masters of them.

150. You have then, in the one case, a beautiful simplicity, and a blameless ignorance; in the other, a beautiful artfulness, and a wisdom which you do not dread,—or, at least, even though dreading, love. But you know also that we may remain in a hateful and culpable ignorance; and, as I fear too many of us in competitive effort feel, become possessed of a hateful knowledge.

Ignorance, therefore, is not evil absolutely; but, innocent, may be loveable.

Knowledge also is not good absolutely; but, guilty, may be hateful.

So, therefore, when I now repeat my former statement, that the first main opposition between the Northern and Southern schools is in the simplicity of the one, and the scholarship of the other, that statement may imply sometimes the superiority of the North, and sometimes of the South. You may have a heavenly simplicity opposed to a hellish (that is to say, a lustful and arrogant) scholarship; or you may have a barbarous and presumptuous ignorance opposed to a divine and disciplined wisdom. Ignorance opposed to learning in both cases; but evil to good, as the case may be.

151. For instance: the last time I was standing before Raphael's arabesques in the Loggias of the Vatican, I wrote down in my pocket-book the description, or, more modestly speaking, the inventory, of the small portion of that infinite wilderness of sensual fantasy which happened to be opposite me. It consisted of a woman's face, with serpents for hair, and a virgin's breasts, with stumps for arms, ending in blue butterfly wings, the whole changing at the waist into a goat's body, which ended below in an obelisk upside-down, to the apex at

* The Cumæan Sibyl, Plate VII., Lecture VI.

the bottom of which were appended, by graceful chains, an altar, and two bunches of grapes.

Now you know in a moment, by a glance at this 'design'—beautifully struck with free hand, and richly gradated in colour,—that the master was familiar with a vast range of art and literature: that he knew all about Egyptian sphinxes, and Greek Gorgons; about Egyptian obelisks, and Hebrew altars; about Hermes, and Venus, and Bacchus, and satyrs, and goats, and grapes.

You know also—or ought to know, in an instant,—that all this learning has done him no good; that he had better have known nothing than any of these things, since they were to be used by him only to such purpose; and that his delight in armless breasts, legless trunks, and obelisks upside-down, has been the last effort of his expiring sensation, in the grasp of corrupt and altogether victorious Death. And you have thus, in Gainsborough as compared with Raphael, a sweet, sacred, and living simplicity, set against an impure, profane, and paralyzed knowledge.

152. But, next, let us consider the reverse conditions.

Let us take instance of contrast between faultful and treacherous ignorance, and divinely pure and fruitful knowledge.

In the place of honour at the end of one of the rooms of your Royal Academy—years ago—stood a picture by an English Academician, announced as a representation of Moses sustained by Aaron and Hur, during the discomfiture of Amalek. In the entire range of the Pentateuch, there is no other scene (in which the visible agents are mortal only) requiring so much knowledge and thought to reach even a distant approximation to the probabilities of the fact. One saw in a moment that the painter was both powerful and simple, after a sort; that he had really sought for a vital conception, and had originally and earnestly read his text, and formed his conception. And one saw also in a moment that he had chanced upon this subject, in reading or hearing his Bible, as he might have chanced on a dramatic scene accidentally in the street. That he knew nothing of the character of Moses,—nothing of his

Botticelli. You see in a moment that this man knows nothing of Sphinxes, or Muses, or Graces, or Aphrodites; and, besides, that, knowing nothing, he would have no liking for them even if he saw them; but much prefers the style of a well-to-do English housekeeper with corkscrew curls, and a portly person.

155. You miss something, I said, in Bewick which you find in Holbein. But do you suppose Holbein himself, or any other Northern painter, could wholly quit himself of the like accusations? I told you, in the second of these lectures, that the Northern temper, refined from savageness, and the Southern, redeemed from decay, met, in Florence. Holbein and Botticelli are the purest types of the two races. Holbein is a civilized boor; Botticelli a reanimate Greek. Holbein was polished by companionship with scholars and kings, but remains always a burgher of Augsburg in essential nature. Bewick and he are alike in temper; only the one is untaught, the other perfectly taught. But Botticelli *needs* no teaching. He is, by his birth, scholar and gentleman to the heart's core. Christianity itself can only inspire him, not refine him. He is as tried gold chased by the jeweller,—the roughest part of him is the outside.

Now how differently must the newly recovered scholastic learning tell upon these two men. It is all out of Holbein's way; foreign to his nature, useless at the best, probably cumbersome. But Botticelli receives it as a child in later years recovers the forgotten dearness of a nursery tale; and is more himself, and again and again himself, as he breathes the air of Greece, and hears, in his own Italy, the lost voice of the Sibyl murmur again by the Avernus Lake.

156. It is not, as we have seen, every one of the Southern race who can thus receive it. But it graces them all; is at once a part of their being; destroys them, if it is to destroy, the more utterly because it so enters into their natures. It destroys Raphael; but it graces him, and is a part of him. It all but destroys Mantegna; but it graces him. And it does not hurt Holbein, just because it does *not* grace him—never is for an instant a part of him. It is with Raphael as



PLATE V.—HEAT CONSIDERED AS A MODE OF MOTION.
Florentine Natural Philosophy.

revolt of German truth against Italian lies ; but he represents also the revolt of German animalism against Hebrew imagination. This figure of Holbein's is half-way from Solomon's mystic bride, to Rembrandt's wife, sitting on his knee while he drinks.

But the key of the question is not in this. Florentine animalism has at this time, also, enough to say for itself. But Florentine animalism, at this time, feels the joy of a gentleman, not of a churl. And a Florentine, whatever he does,—be it virtuous or sinful, chaste or lascivious, severe or extravagant,—does it with a grace.

158. You think, perhaps, that Holbein's Solomon's bride is so ungraceful chiefly because she is overdressed, and has too many feathers and jewels. No ; a Florentine would have put any quantity of feathers and jewels on her, and yet never lost her grace. You shall see him do it, and that to a fantastic degree, for I have an example under my hand. Look back, first, to Bewick's Venus (*Lect. III.*, p. 57). You can't accuse her of being overdressed. She complies with every received modern principle of taste. Sir Joshua's precept that drapery should be "drapery, and nothing more," is observed more strictly even by Bewick than by Michael Angelo. If the absence of decoration could exalt the beauty of his Venus, here had been her perfection.

Now look back to Plate II. (*Lect. IV.*), by Sandro ; Venus in her planet, the ruling star of Florence. Anything more grotesque in conception, more unrestrained in fancy of ornament, you cannot find, even in the final days of the Renaissance. Yet Venus holds her divinity through all ; she will become majestic to you as you gaze ; and there is not a line of her chariot wheels, of her buskins, or of her throne, which you may not see was engraved by a gentleman.

159. Again, Plate V., opposite, is a facsimile of another engraving of the same series—the Sun in Leo. It is even more extravagant in accessories than the Venus. You see the Sun's epaulettes before you see the sun ; the spiral scrolls of his chariot, and the black twisted rays of it, might, so far as types of form only are considered, be a design for some

modern court-dress star, to be made in diamonds. And yet all this wild ornamentation is, if you will examine it, more purely Greek in spirit than the Apollo Belvidere.

You know I have told you, again and again, that the soul of Greece is her veracity; that what to other nations were fables and symbolisms, to her became living facts—living gods. The fall of Greece was instant when her gods again became fables. The Apollo Belvidere is the work of a sculptor to whom Apollonism is merely an elegant idea on which to exhibit his own skill. He does not himself feel for an instant that the handsome man in the unintelligible attitude,* with drapery hung over his left arm, as it would be hung to dry over a clothes-line, is the Power of the Sun. But the Florentine believes in Apollo with his whole mind, and is trying to explain his strength in every touch.

For instance; I said just now, "You see the sun's epaulettes before the sun." Well, *don't* you, usually, as it rises? Do you not continually mistake a luminous cloud for it, or wonder where it is, behind one? Again, the face of the Apollo Belvidere is agitated by anxiety, passion, and pride. Is the sun's likely to be so, rising on the evil and the good? This Prince sits crowned and calm: look at the quiet fingers of the hand holding the sceptre,—at the restraint of the reins merely by a depression of the wrist.

160. You have to look carefully for those fingers holding the sceptre, because the hand—which a great anatomist would have made so exclusively interesting—is here confused with the ornamentation of the arm of the chariot on which it rests. But look what the ornamentation is;—fruit and leaves, abundant, in the mouth of a cornucopia. A quite vulgar and meaningless ornament in ordinary renaissance work. Is it so

*I read somewhere, lately, a new and very ingenious theory about the attitude of the Apollo Belvidere, proving, to the author's satisfaction, that the received notion about watching the arrow was all a mistake. The paper proved, at all events, one thing—namely, the statement in the text. For an attitude which has been always hitherto taken to mean one thing, and is plausibly asserted now to mean another, must be in itself unintelligible.

here, think you? Are not the leaves and fruits of earth in the Sun's hand? *

You thought, perhaps, when I spoke just now of the action of the right hand, that less than a depression of the wrist would stop horses such as those. You fancy Botticelli drew them so, because he had never seen a horse; or because, able to draw fingers, he could not draw hoofs! How fine it would be to have, instead, a prancing four-in-hand, in the style of Piccadilly on the Derby-day, or at least horses like the real Greek horses of the Parthenon!

Yes; and if they had had real ground to trot on, the Florentine would have shown you he knew how they should trot. But these have to make their way up the hillside of other lands. Look to the example in your standard series, Hermes Eriophoros. You will find his motion among clouds represented precisely in this labouring, failing, half-kneeling attitude of limb. These forms, toiling up through the rippled sands of heaven, are—not horses;—they are clouds themselves, *like* horses, but only a little like. Look how their hoofs lose themselves, buried in the ripples of cloud; it makes one think of the quicksands of Morecambe Bay.

And their tails—what extraordinary tufts of tails, ending in points! Yes; but do you not see, nearly joining with them, what is not a horse tail at all; but a flame of fire, kindled at Apollo's knee? All the rest of the radiance about him shoots *from* him. But this is rendered *up* to him. As the fruits of the earth are in one of his hands, its fire is in the other. And all the warmth, as well as all the light of it, are his.

We had a little natural philosophy, gentlemen, as well as theology, in Florence, once upon a time.

161. Natural philosophy, and also natural art, for in this the Greek reanimate was a nobler creature than the Greek who had died. His art had a wider force and warmer glow. I have told you that the first Greeks were distinguished from the barbarians by their simple humanity; the second Greeks—these Florentine Greeks reanimate—are human more strong-

* It may be asked, why not corn also? Because that belongs to Ceres, who is equally one of the great gods.

ly, more deeply, leaping from the Byzantine death at the call of Christ, "Loose him, and let him go." And there is upon them at once the joy of resurrection, and the solemnity of the grave.

162. Of this resurrection of the Greek, and the form of the tomb he had been buried in "those four days," I have to give you some account in the last lecture. I will only to-day show you an illustration of it which brings us back to our immediate question as to the reasons why Northern art could not accept classicism. When, in the closing lecture of Aratra Pentelici, I compared Florentine with Greek work, it was to point out to you the eager passions of the first as opposed to the formal legalism and proprieties of the other. Greek work, I told you, while truthful, was also restrained, and never but under majesty of law; while Gothic work was true, in the perfect law of Liberty or Franchise. And now I give you in facsimile (Plate VI.) the two Aphrodites thus compared—the Aphrodite Thalassia of the Tyrrhene seas, and the Aphrodite Urania of the Greek skies. You may not at first like the Tuscan best; and why she is the best, though both are noble, again I must defer explaining to next lecture. But now turn back to Bewick's Venus, and compare her with the Tuscan Venus of the Stars, (Plate II.); and then here, in Plate VI., with the Tuscan Venus of the Seas, and the Greek Venus of the Sky. Why is the English one vulgar? What is it, in the three others, which makes them, if not beautiful, at least refined?—every one of them 'designed' and drawn, indisputably, by a gentleman?

I never have been so puzzled by any subject of analysis as, for these ten years, I have been by this. Every answer I give, however plausible it seems at first, fails in some way, or in some cases. But there is the point for you, more definitely put, I think, than in any of my former books;—at present, for want of time, I must leave it to your own thoughts.

163. II. The second influence under which engraving developed itself, I said, was that of medicine and the physical sciences. Gentlemen, the most audacious, and the most valuable, statement which I have yet made to you on the sub-



PLATE VI.—FAIRNESS OF THE SEA AND AIR.
In Venice and Athens.

ject of practical art, in these rooms, is that of the evil resulting from the study of anatomy. It is a statement so audacious, that not only for some time I dared not make it to you, but for ten years, at least, I dared not make it to myself. I saw, indeed, that whoever studied anatomy was in a measure injured by it; but I kept attributing the mischief to secondary causes. It *can't* be this drink itself that poisons them, I said always. This drink is medicinal and strengthening: I see that it kills them, but it must be because they drink it cold when they have been hot, or they take something else with it that changes it into poison. The drink itself *must* be good. Well, gentlemen, I found out the drink itself to be poison at last, by the breaking of my choicest Venice glass. I could not make out what it was that had killed Tintoret, and laid it long to the charge of chiaroscuro. It was only after my thorough study of his Paradise, in 1870, that I gave up this idea, finding the chiaroscuro, which I had thought exaggerated was, in all original and undarkened passages, beautiful and most precious. And then at last I got hold of the true clue: "Il disegno di Michel Agnolo." And the moment I had dared to accuse that, it explained everything; and I saw that the betraying demons of Italian art, led on by Michael Angelo, had been, not pleasure, but knowledge; not indolence, but ambition; and not love, but horror.

164. But when first I ventured to tell you this, I did not know, myself, the fact of all most conclusive for its confirmation. It will take me a little while to put it before you in its total force, and I must first ask your attention to a minor point. In one of the smaller rooms of the Munich Gallery is Holbein's painting of St. Margaret and St. Elizabeth of Hungary,—standard of his early religious work. Here is a photograph from the St. Elizabeth; and, in the same frame, a French lithograph of it. I consider it one of the most important pieces of comparison I have arranged for you, showing you at a glance the difference between true and false sentiment. Of that difference, generally, we cannot speak to-day, but one special result of it you are to observe;—the omission, in the French drawing, of Holbein's daring representation of

disease, which is one of the vital honours of the picture. Quite one of the chief strengths of St. Elizabeth, in the Roman Catholic view, was in the courage of her dealing with disease, chiefly leprosy. Now observe, I say *Roman Catholic* view, very earnestly just now ; I am not at all sure that it is so in a Catholic view—that is to say, in an eternally Christian and Divine view. And this doubt, very nearly now a certainty, only came clearly into my mind the other day after many and many a year's meditation on it. I had read with great reverence all the beautiful stories about Christ's appearing as a leper, and the like ; and had often pitied and rebuked myself alternately for my intense dislike and horror of disease. I am writing at this moment within fifty yards of the grave of St. Francis, and the story of the likeness of his feelings to mine had a little comforted me, and the tradition of his conquest of them again humiliated me ; and I was thinking very gravely of this, and of the parallel instance of Bishop Hugo of Lincoln, always desiring to do service to the dead, as opposed to my own unmitigated and Louis-Quinze-like horror of funerals ;—when by chance, in the cathedral of Palermo, a new light was thrown for me on the whole matter.

165. I was drawing the tomb of Frederick II., which is shut off by a grating from the body of the church ; and I had, in general, quite an unusual degree of quiet and comfort at my work. But sometimes it was paralyzed by the unconscious interference of one of the men employed in some minor domestic services about the church. When he had nothing to do, he used to come and seat himself near my grating, not to look at my work, (the poor wretch had no eyes, to speak of,) nor in any way meaning to be troublesome ; but there was his habitual seat. His nose had been carried off by the most loathsome of diseases ; there were two vivid circles of scarlet round his eyes ; and as he sat, he announced his presence every quarter of a minute (if otherwise I could have forgotten it) by a peculiarly disgusting, loud, and long expectoration. On the second or third day, just as I had forced myself into some forgetfulness of him, and was hard at my work, I was startled from it again by the bursting out of a loud and

cheerful conversation close to me ; and on looking round, saw a lively young fledgling of a priest, seventeen or eighteen years old, in the most eager and spirited chat with the man in the chair. He talked, laughed, and spat, himself, companionably, in the merriest way, for a quarter of an hour ; evidently without feeling the slightest disgust, or being made serious for an instant, by the aspect of the destroyed creature before him.

166. His own face was simply that of the ordinary vulgar type of thoughtless young Italians, rather beneath than above the usual standard ; and I was certain, as I watched him, that he was not at all my superior, but very much my inferior, in the coolness with which he beheld what was to me so dreadful. I was positive that he could look this man in the face, precisely because he could *not* look, discerningly, at any beautiful or noble thing ; and that the reason I dared not, was because I had, spiritually, as much better eyes than the priest, as bodily, than his companion.

Having got so much of clear evidence given me on the matter, it was driven home for me a week later, as I landed on the quay of Naples. Almost the first thing that presented itself to me was the sign of a travelling theatrical company, displaying the principal scene of the drama to be enacted on their classical stage. Fresh from the theatre of Taormina, I was curious to see the subject of the Neapolitan popular drama. It was the capture, by the police, of a man and his wife who lived by boiling children. One section of the police was coming in, armed to the teeth, through the passage ; another section of the police, armed to the teeth, and with high feathers in its caps, was coming up through a trap-door. In fine dramatic unconsciousness to the last moment, like the clown in a pantomime, the child-boiler was represented as still industriously chopping up a child, pieces of which, ready for the pot, lay here and there on the table in the middle of the picture. The child-boiler's wife, however, just as she was taking the top off the pot to put the meat in, had caught a glimpse of the foremost policeman, and stopped, as much in rage as in consternation.

167. Now it is precisely the same feeling, or want of feeling, in the lower Italian (nor always in the lower classes only) which makes him demand the kind of subject for his secular drama ; and the Crucifixion and Pieta for his religious drama. The only part of Christianity he can enjoy is its horror ; and even the saint or saintess are not always denying themselves severely, either by the contemplation of torture, or the companionship with disease.

Nevertheless, we must be cautious, on the other hand, to allow full value to the endurance, by tender and delicate persons, of what is really loathsome or distressful to them in the service of others ; and I think this picture of Holbein's indicative of the exact balance and rightness of his own mind in this matter, and therefore of his power to conceive a true saint also. He had to represent St. Catherine's chief effort ;—he paints her ministering to the sick, and, among them, is a leper ; and finding it thus his duty to paint leprosy, he courageously himself studies it from the life. Not to insist on its horror ; but to assert it, to the needful point of fact, which he does with medical accuracy.

Now here is just a case in which science, in a subordinate degree, is really required for a spiritual and moral purpose. And you find Holbein does not shrink from it even in this extreme case in which it is most painful.

168. If, therefore, you *do* find him in other cases not using it, you may be sure he knew it to be unnecessary.

Now it may be disputable whether in order to draw a living Madonna, one need to know how many ribs she has ; but it would have seemed indisputable that in order to draw a skeleton, one must know how many ribs *it* has.

Holbein is par excellence the draughtsman of skeletons. His painted Dance of Death was, and his engraved Dance of Death is, principal of such things, without any comparison or denial. He draws skeleton after skeleton, in every possible gesture ; but never so much as counts their ribs ! He neither knows nor cares how many ribs a skeleton has. There are always enough to rattle.

Monstrous, you think, in impudence,—Holbein for his care

lessness, and I for defending him! Nay, I triumph in him; nothing has ever more pleased me than this grand negligence. Nobody wants to know how many ribs a skeleton has, any more than how many bars a gridiron has, so long as the one can breathe, and the other broil; and still less, when the breath and the fire are both out.

169. But is it only of the bones, think you, that Holbein is careless? * Nay, incredible though it may seem to you,—but, to me, explanatory at once of much of his excellence,—he did not know anatomy at all! I told you in my Preface, already quoted, Holbein studies the face first, the body secondarily; but I had no idea, myself, how completely he had refused the venomous science of his day. I showed you a dead Christ of his, long ago. Can you match it with your academy drawings, think you? And yet he did not, and would not, know anatomy. *He* would not; but Durer would, and did:—went hotly into it—wrote books upon it, and upon ‘proportions of the human body,’ etc., etc., and all your modern recipes for painting flesh. How did his studies prosper his art?

People are always talking of his Knight and Death, and his Melancholia, as if those were his principal works. They are his characteristic ones, and show what he might have been, *without* his anatomy; but they were mere bye-play compared to his Greater Fortune, and Adam and Eve. Look at these. Here is his full energy displayed; here are both male and female forms drawn with perfect knowledge of their bones and muscles, and modes of action and digestion,—and I hope you are pleased.

But it is not anatomy only that Master Albert studies. He has a taste for optics also; and knows all about refraction and reflection. What with his knowledge of the skull inside, and the vitreous lens outside, if any man in the world is to draw an eye, here’s the man to do it, surely! With a hand which can give lessons to John Bellini, and a care which would fain do all so that it can’t be done better, and acquaintance with

* Or inventive! See Woltmann, p. 267. “The shin-bone, or the lower part of the arm, exhibit only one bone, while the upper arm and thigh are often allowed the luxury of two”!

every crack in the cranium, and every humour in the lens,—if we can't draw an eye, we should just like to know who can! thinks Albert.

So having to engrave the portrait of Melancthon, instead of looking at Melancthon, as ignorant Holbein would have been obliged to do,—wise Albert looks at the room window; and finds it has four cross-bars in it, and knows scientifically that the light on Melancthon's eye must be a reflection of the window with its four bars—and engraves it so, accordingly; and who shall dare to say, now, it isn't like Melancthon?

Unfortunately, however, it isn't, nor like any other person in his senses; but like a madman looking at somebody who disputes his hobby. While in this drawing of Holbein's, where a dim grey shadow leaves a mere crumb of white paper,—accidentally it seems, for all the fine scientific reflection,—behold, it is an eye indeed, and of a noble creature.

170. What is the reason? do you ask me; and is all the common teaching about generalization of details true, then?

No; not a syllable of it is true. Holbein is right, not because he draws more generally, but more truly, than Durer. Durer draws what he knows is there; but Holbein, only what he sees. And, as I have told you often before, the really scientific artist is he who not only asserts bravely what he *does* see, but confesses honestly what he does *not*. You must not draw all the hairs in an eyelash; not because it is sublime to generalize them, but because it is impossible to see them. How many hairs there are, a sign painter or an anatomist may count; but how few of them you can see, it is only the utmost masters, Carpaccio, Tintoret, Reynolds, and Velasquez, who count, or know.

171. Such was the effect, then, of his science upon Durer's ideal of beauty, and skill in portraiture. What effect had it on the temper and quantity of his work, as compared with poor ignorant Holbein's! You have only three portraits, by Durer, of the great men of his time, and those bad ones; while he toils his soul out to draw the hoofs of satyrs, the bristles of swine, and the distorted aspects of base women and vicious men.

What, on the contrary, has ignorant Holbein done for you? Shakspeare and he divide between them, by word and look, the Story of England under Henry and Elizabeth.

172. Of the effect of science on the art of Mantegna and Marc Antonio, (far more deadly than on Durer's,) I must tell you in a future lecture;—the effect of it on their minds, I must partly refer to now, in passing to the third head of my general statement—the influence of new Theology. For Durer and Mantegna, chiefly because of their science, forfeited their place, not only as painters of men, but as servants of God. Neither of them has left one completely noble or completely didactic picture; while Holbein and Botticelli, in consummate pieces of art, led the way before the eyes of all men, to the purification of their Church and land.

173. III. But the need of reformation presented itself to these two men last named on entirely different terms.

To Holbein, when the word of the Catholic Church proved false, and its deeds bloody; when he saw it selling permission of sin in his native Augsburg, and strewing the ashes of its enemies on the pure Alpine waters of Constance, what refuge was there for *him* in more ancient religion? Shall he worship Thor again, and mourn over the death of Balder? He reads Nature in her desolate and narrow truth, and she teaches him the Triumph of Death.

But, for Botticelli, the grand gods are old, are immortal. The priests may have taught falsely the story of the Virgin;—did they not also lie, in the name of Artemis, at Ephesus; in the name of Aphrodite, at Cyprus?—but shall, therefore, Chastity or Love be dead, or the full moon paler over Arno? Saints of Heaven and Gods of Earth!—shall *these* perish because vain men speak evil of them? Let *us* speak good for ever, and grave, as on the rock, for ages to come, the glory of Beauty, and the triumph of Faith.

174. Holbein had bitterer task.

Of old, the one duty of the painter had been to exhibit the virtues of this life, and hopes of the life to come. Holbein had to show the vices of this life, and to obscure the hope of the future. “Yes, we walk through the valley of the shadow

of death, and fear all evil, for Thou art not with us, and Thy rod and Thy staff comfort us not." He does not choose this task. It is thrust upon him,—just as fatally as the burial of the dead is in a plague-struck city. These are the things he sees, and must speak. He will not become a better artist thereby ; no drawing of supreme beauty, or beautiful things, will be possible to him. Yet we cannot say he ought to have done anything else, nor can we praise him specially in doing this. It is his fate ; the fate of all the bravest in that day.

175. For instance, there is no scene about which a shallow and feeble painter would have been more sure to adopt the commonplaces of the creed of his time than the death of a child,—chiefly, and most of all, the death of a country child,—a little thing fresh from the cottage and the field. Surely for such an one, angels will wait by its sick bed, and rejoice as they bear its soul away ; and over its shroud flowers will be strewn, and the birds will sing by its grave. So your common sentimentalist would think, and paint. Holbein sees the facts, as they verily are, up to the point when vision ceases. He speaks, then no more.

The country labourer's cottage—the rain coming through its roof, the clay crumbling from its partitions, the fire lighted with a few chips and sticks on a raised piece of the mud floor,—such dais as can be contrived, for use, not for honour. The damp wood sputters ; the smoke, stopped by the roof, though the rain is not, coils round again, and down. But the mother can warm the child's supper of bread and milk so—holding the pan by the long handle ; and on mud floor though it be, they are happy,—she, and her child, and its brother,—if only they could be left so. They shall not be left so : the young thing must leave them—will never need milk warmed for it any more. It would fain stay,—sees no angels—feels only an icy grip on its hand, and that it cannot stay. Those who loved it shriek and tear their hair in vain, amazed in grief. 'Oh, little one, you must lie out in the fields then, not even under this poor torn roof of thy mother's to-night?'

176. Again : there was not in the old creed any subject more definitely and constantly insisted on than the death of a

miser. He had been happy, the old preachers thought, till then : but his hour has come ; and the black covetousness of hell is awake and watching ; the sharp, harpy claws will clutch his soul out of his mouth, and scatter his treasure for others. So the commonplace preacher and painter taught. Not so Holbein. The devil want to snatch his soul, indeed ! Nay, he never *had* a soul, but of the devil's giving. His misery to begin on his deathbed ! Nay, he had never an unmiserable hour of life. The fiend is with him now,—a paltry, abortive fiend, with no breath even to blow hot with. He supplies the hell-blast *with a machine*. It is winter, and the rich man has his furred cloak and cap, thick and heavy ; the beggar, bare-headed to beseech him, skin and rags hanging about him together, touches his shoulder, but all in vain ; there is other business in hand. More haggard than the beggar himself, wasted and palsied, the rich man counts with his fingers the gain of the years to come.

But of those years, infinite, that are to be, Holbein says nothing. 'I know not ; I see not. This only I see, on this very winter's day, the low pale stumbling-block at your feet, the altogether by you unseen and forgotten Death. You shall not pass *him* by on the other side ; here is a fasting figure in skin and bone, at last, that will stop you ; and for all the hidden treasures of earth, here is your spade : dig now, and find them.'

177. I have said that Holbein was condemned to teach these things. He was not happy in teaching them, nor thanked for teaching them. Nor was Botticelli for his lovelier teaching. But they both could do no otherwise. They lived in truth and steadfastness ; and with both, in their marvellous design, veracity is the beginning of invention, and love its end.

I have but time to show you, in conclusion, how this affectionate self-forgetfulness protects Holbein from the chief calamity of the German temper, vanity, which is at the root of all Durer's weakness. Here is a photograph of Holbein's portrait of Erasmus, and a fine proof of Durer's. In Holbein's, the face leads everything ; and the most lovely qualities of the face lead in that. The cloak and cap are perfectly

painted, just because you look at them neither more nor less than you would have looked at the cloak in reality. You don't say, 'How brilliantly they are touched,' as you would with Rembrandt ; nor 'How gracefully they are neglected, as you would with Gainsborough ; nor 'How exquisitely they are shaded,' as you would with Leonardo ; nor 'How grandly they are composed,' as you would with Titian. You say only, 'Erasmus is surely there ; and what a pleasant sight !' You don't think of Holbein at all. He has not even put in the minutest letter H, that I can see, to remind you of him. Drops his H's, I regret to say, often enough. 'My hand should be enough for you ; what matters my name ?' But now, look at Durer's. The very first thing you see, and at any distance, is this great square tablet with

"The image of Erasmus, drawn from the life by Albert Durer, 1526,"

and a great straddling A.D. besides. Then you see a cloak, and a table, and a pot, with flowers in it, and a heap of books with all their leaves and all their clasps, and all the little bits of leather gummed in to mark the places ; and last of all you see Erasmus's face ; and when you do see it, the most of it is wrinkles.

All egotism and insanity, this, gentlemen. Hard words to use ; but not too hard to define the faults which rendered so much of Durer's great genius abortive, and to this day paralyze, among the details of a lifeless and ambitious precision, the student, no less than the artist, of German blood. For too many an Erasmus, too many a Durer, among them, the world is all cloak and clasp, instead of face or book ; and the first object of their lives is to engrave their initials.

For us, in England, not even so much is at present to be hoped ; and yet, singularly enough, it is more our modesty, unwisely submissive, than our vanity, which has destroyed our English school of engraving.

At the bottom of the pretty line engravings which used to represent, characteristically, our English skill, one saw always *two* inscriptions. At the left-hand corner, "Drawn by—so-and-so ;" at the right-hand corner, "Engraved by—so-and-

so." Only under the worst and cheapest plates—for the Stationer's Almanack, or the like,—one saw sometimes, "Drawn and engraved by so-and-so," which meant nothing more than that the publisher would not go to the expense of an artist, and that the engraver haggled through as he could. (One fortunate exception, gentlemen, you have in the old drawings for your Oxford Almanack, though the publishers, I have no doubt, even in that case, employed the cheapest artist they could find.*) But in general, no engraver thought himself able to draw; and no artist thought it his business to engrave.

But the fact that this and the following lecture are on the subject of design in engraving, implies of course that in the work we have to examine, it was often the engraver himself who designed, and as often the artist who engraved.

And you will observe that the only engravings which bear imperishable value are, indeed, in this kind. It is true that, in woodcutting, both Durer and Holbein, as in our own days Leech and Tenniel, have workmen under them who can do all they want. But in metal cutting it is not so. For, as I have told you, in metal cutting, ultimate perfection of Line has to be reached; and it can be reached by none but a master's hand; nor by his, unless in the very moment and act of designing. Never, unless under the vivid first force of imagination and intellect, can the Line have its full value. And for this high reason, gentlemen, that paradox which perhaps seemed to you so daring, is nevertheless deeply and finally true, that while a woodcut may be laboriously finished, a grand engraving on metal must be comparatively incomplete. For it must be done, throughout, with the full fire of temper in it, visibly governing its lines, as the wind does the fibres of cloud.

* The drawings were made by Turner, and are now among the chief treasures of the Oxford Galleries. I ought to add some notice of Hogarth to this lecture in the Appendix; but fear I shall have no time; besides, though I have profound respect for Hogarth, as, in literature, I have for Fielding, I can't criticise them, because I know nothing of their subjects.

The value hitherto attached to Rembrandt's etchings, and others imitating them, depends on a true instinct in the public mind for this virtue of line. But etching is an indolent and blundering method at the best; and I do not doubt that you will one day be grateful for the severe disciplines of drawing required in these schools, in that they will have enabled you to know what a line may be, driven by a master's chisel on silver or marble, following, and fostering as it follows, the instantaneous strength of his determined thought.

LECTURE VI.

DESIGN IN THE FLORENTINE SCHOOLS OF ENGRAVING.

1. In the first of these lectures, I stated to you their subject, as the investigation of the engraved work of a group of men, to whom engraving, as a means of popular address, was above all precious, because their art was distinctively didactic.

Some of my hearers, must be aware that, of late years, the assertion that art should be didactic has been clamorously and violently derided by the countless crowd of artists who have nothing to represent, and of writers who have nothing to say; and that the contrary assertion—that art consists only in pretty colours and fine words,—is accepted, readily enough, by a public which rarely pauses to look at a picture with attention, or read a sentence with understanding.

2. Gentlemen, believe me, there never was any great advancing art yet, nor can be, without didactic purpose. The leaders of the strong schools are, and must be always, either teachers of theology, or preachers of the moral law. I need not tell you that it was as teachers of theology on the walls of the Vatican that the masters with whose names you are most familiar obtained their perpetual fame. But however great their fame, you have not practically, I imagine, ever been materially assisted in your preparation for the schools either of philosophy or divinity by Raphael's 'School of Athens,' by Raphael's 'Theology,'—or by Michael Angelo's 'Judgment.'

My task, to-day, is to set before you some part of the design of the first Master of the works in the Sistine Chapel ; and I believe that, from his teaching, you will, even in the hour which I ask you now to give, learn what may be of true use to you in all your future labour, whether in Oxford or elsewhere.

3. You have doubtless, in the course of these lectures, been occasionally surprised by my speaking of Holbein and Sandro Botticelli, as Reformers, in the same tone of respect, and with the same implied assertion of their intellectual power and agency, with which it is usual to speak of Luther and Savonarola. You have been accustomed, indeed, to hear painting and sculpture spoken of as supporting or enforcing Church doctrine ; but never as reforming or chastising it. Whether Protestant or Roman Catholic, you have admitted what in the one case you held to be the abuse of painting, in the furtherance of idolatry—in the other, its amiable and exalting ministry to the feebleness of faith. But neither have recognized,—the Protestant his ally,—or the Catholic his enemy, in the far more earnest work of the great painters of the fifteenth century. The Protestant was, in most cases, too vulgar to understand the aid offered to him by painting ; and in all cases too terrified to believe in it. He drove the gift-bringing Greek with imprecations from his sectarian fortress, or received him within it only on the condition that he should speak no word of religion there.

4. On the other hand, the Catholic, in most cases too indolent to read, and, in all, too proud to dread, the rebuke of the reforming painters, confused them with the crowd of his old flatterers, and little noticed their altered language, or their graver brow. In a little while, finding they had ceased to be amusing, he effaced their works, not as dangerous, but as dull ; and recognized only thenceforward, as art, the innocuous bombast of Michael Angelo, and fluent efflorescence of Bernini. But when you become more intimately and impartially acquainted with the history of the Reformation, you will find that, as surely and earnestly as Memling and Giotto strove in the north and south to set forth and exalt the Cath-

olic faith, so surely and earnestly did Holbein and Botticelli strive, in the north, to chastise, and, in the south, to revive it. In what manner, I will try to-day briefly to show you.

5. I name these two men as the reforming leaders; there were many, rank and file, who worked in alliance with Holbein; with Botticelli, two great ones, Lippi and Perugino. But both of these had so much pleasure in their own pictorial faculty, that they strove to keep quiet, and out of harm's way, —involuntarily manifesting themselves sometimes, however; and not in the wisest manner. Lippi's running away with a novice was not likely to be understood as a step in Church reformation correspondent to Luther's marriage.* Nor have Protestant divines, even to this day, recognized the real meaning of the reports of Perugino's 'infidelity.' Botticelli, the pupil of the one, and the companion of the other, held the truths they taught him through sorrow as well as joy; and he is the greatest of the reformers, because he preached without blame; though the least known, because he died without victory.

I had hoped to be able to lay before you some better biography of him than the traditions of Vasari, of which I gave a short abstract some time back in *Fors Clavigera*; but as yet I have only added internal evidence to the popular story, the more important points of which I must review briefly. It will not waste your time if I read,—instead of merely giving you reference to,—the passages on which I must comment.

6. "His father, Mariano Filipepi, a Florentine citizen, brought him up with care, and caused him to be instructed in all such things as are usually taught to children before they choose a calling. But although the boy readily acquired whatever he wished to learn, yet was he constantly discon-

* The world was not then ready for *Le Père Hyacinthe*;—but the real gist of the matter is that Lippi did, openly and bravely, what the highest prelates in the Church did basely and in secret; also he loved, where they only lusted; and he has been proclaimed therefore by them—and too foolishly believed by us—to have been a shameful person. Of his true life, and the colours given to it, we will try to learn something tenable, before we end our work in Florence.

tented ; neither would he take any pleasure in reading, writing, or accounts, insomuch that the father, disturbed by the eccentric habits of his son, turned him over in despair to a gossip of his, called Botticello, who was a goldsmith, and considered a very competent master of his art, to the intent that the boy might learn the same."

"He took no pleasure in reading, writing, nor accounts"! You will find the same thing recorded of Cimabue ; but it is more curious when stated of a man whom I cite to you as typically a gentleman and a scholar. But remember, in those days, though there were not so many entirely correct books issued by the Religious Tract Society for boys to read, there were a great many more pretty things in the world for boys to see. The Val d'Arno was Pater-noster Row to purpose ; their Father's Row, with books of His writing on the mountain shelves. And the lad takes to looking at things, and thinking about them, instead of reading about them,—which I commend to you, also, as much the more scholarly practice of the two. To the end, though he knows all about the celestial hierarchies, he is not strong in his letters, nor in his dialect. I asked Mr. Tyrrwhitt to help me through with a bit of his Italian the other day. Mr. Tyrrwhitt could only help me by suggesting that it was "Botticelli for so-and-so." And one of the minor reasons which induce me so boldly to attribute these sibyls to him, instead of Bandini, is that the lettering is so ill done. The engraver would assuredly have had his lettering all right,—or at least neat. Botticelli blunders through it, scratches impatiently out when he goes wrong ; and as I told you there's no repentance in the engraver's trade leaves all the blunders visible.

7. I may add one fact bearing on this question lately communicated to me.* In the autumn of 1872 I possessed myself of an Italian book of pen drawings, some, I have no doubt, by Mantegna in his youth, others by Sandro himself. In examining these, I was continually struck by the comparatively feeble and blundering way in which the titles were

* I insert supplementary notes, when of importance, in the text of the lecture, for the convenience of the general reader.

written, while all the rest of the handling was really superb; and still more surprised when, on the sleeves and hem of the robe of one of the principal figures of women, ("Helena rapita da Paris,") I found what seemed to be meant for inscriptions, intricately embroidered; which nevertheless, though beautifully drawn, I could not read. In copying Botticelli's Zipporah this spring, I found the border of her robe wrought with characters of the same kind, which a young painter, working with me, who already knows the minor secrets of Italian art better than I,* assures me are letters,—and letters of a language hitherto undeciphered.

8. "There was at that time a close connexion and almost constant intercourse between the goldsmiths and the painters, wherefore Sandro, who possessed considerable ingenuity, and was strongly disposed to the arts of design, became enamoured of painting, and resolved to devote himself entirely to that vocation. He acknowledged his purpose at once to his father; and the latter, who knew the force of his inclination, took him accordingly to the Carmelite monk, Fra Filippo, who was a most excellent painter of that time, with whom he placed him to study the art, as Sandro himself had desired. Devoting himself thereupon entirely to the vocation he had chosen, Sandro so closely followed the directions, and imitated the manner, of his master, that Fra Filippo conceived a great love for him, and instructed him so effectually, that Sandro rapidly attained to such a degree in art as none would have predicted for him."

I have before pointed out to you the importance of training by the goldsmith. Sandro got more good of it, however, than any of the other painters so educated,—being enabled by it to use gold for light to colour, in a glowing harmony never reached with equal perfection, and rarely attempted, in the later schools. To the last, his paintings are partly treated as work in niello; and he names himself, in perpetual gratitude, from this first artizan master. Nevertheless, the fortunate fellow finds, at the right moment, another, even more to his mind, and is obedient to him through his youth, as to

* Mr. Charles F. Murray.

the other through his childhood. And this master loves him ; and instructs him 'so effectually,'—in grinding colors, do you suppose, only ; or in laying of lines only ; or in anything more than these ?

9. I will tell you what Lippi must have taught any boy whom he loved. First, humility, and to live in joy and peace, injuring no man—if such innocence might be. Nothing is so manifest in every face by him, as its gentleness and rest. Secondly, to finish his work perfectly, and in such temper that the angels might say of it—not he himself—'*Iste perfecit opus.*' Do you remember what I told you in the Eagle's Nest, that true humility was in hoping that angels might sometimes admire *our* work ; not in hoping that we should ever be able to admire *theirs* ? Thirdly,—a little thing it seems, but was a great one,—love of flowers. No one draws such lilies or such daisies as Lippi. Botticelli beat him afterwards in roses, but never in lilies. Fourthly, due honour for classical tradition, Lippi is the only religious painter who dresses John Baptist in the camel-skin, as the Greeks dressed Heracles in the lion's,—over the head. Lastly, and chiefly of all,—Le Père Hyacinthe taught his pupil certain views about the doctrine of the Church, which the boy thought of more deeply than his tutor, and that by a great deal ; and Master Sandro presently got himself into such question for painting heresy, that if he had been as hot-headed as he was true-hearted, he would soon have come to bad end by the tar-barrel. But he is so sweet and so modest, that nobody is frightened ; so clever, that everybody is pleased : and at last, actually the Pope sends for him to paint his own private chapel,—where the first thing my young gentleman does, mind you, is to paint the devil, in a monk's dress tempting Christ ! The sauciest thing, out and out, done in the history of the Reformation, it seems to me ; yet so wisely done, and with such true respect otherwise shown for what was sacred in the Church, that the Pope didn't mind : and all went on as merrily as marriage bells.

10. I have anticipated, however, in telling you this, the proper course of his biography, to which I now return.

"While still a youth he painted the figure of Fortitude, among those pictures of the Virtues which Antonio and Pietro Pollaiuolo were executing in the Mercatanzia, or Tribunal of Commerce, in Florence. In Santo Spirito, a church of the same city, he painted a picture for the chapel of the Bardi family: this work he executed with great diligence, and finished it very successfully, depicting certain olive and palm trees therein with extraordinary care."

It is by a beautiful chance that the first work of his, specified by his Italian biographer, should be the Fortitude.* Note also what is said of his tree drawing.

"Having, in consequence of this work, obtained much credit and reputation, Sandro was appointed by the Guild of Porta Santa Maria to paint a picture in San Marco, the subject of which is the Coronation of Our Lady, who is surrounded by a choir of angels—the whole extremely well designed, and finished by the artist with infinite care. He executed various works in the Medici Palace for the elder Lorenzo, more particularly a figure of Pallas on a shield wreathed with vine branches, whence flames are proceeding: this he painted of the size of life. A San Sebastiano was also among the most remarkable of the works executed for Lorenzo. In the church of Santa Maria Maggiore, in Florence, is a Pietà, with small figures, by this master: this is a very beautiful work. For different houses in various parts of the city Sandro painted many pictures of a round form, with numerous figures of women undraped. Of these there are still two examples at Castello, a villa of the Duke Cosimo,—one representing the birth of Venus, who is borne to earth by the Loves and Zephyrs; the second also presenting the figure of Venus crowned with flowers by the Graces: she is here intended to denote the Spring, and the allegory is expressed by the painter with extraordinary grace."

Our young Reformer enters, it seems, on a very miscellaneous course of study; the Coronation of Our Lady; St. Sebastian; Pallas in vine-leaves; and Venus,—without fig-leaves.

* Some notice of this picture is given at the beginning of my third Morning in Florence, 'Before the Soldan.'

Not wholly Calvinistic, Fra Filippo's teaching seems to have been! All the better for the boy—being such a boy as he was: but I cannot in this lecture enter farther into my reasons for saying so.

11. Vasari, however, has shot far ahead in telling us of this picture of the Spring, which is one of Botticelli's completest works. Long before he was able to paint Greek nymphs, he had done his best in idealism of greater spirits; and, while yet quite a youth, painted, at Castello, the Assumption of Our Lady, with "the patriarchs, the prophets, the apostles, the evangelists, the martyrs, the confessors, the doctors, the virgins, and the hierarchies!"

Imagine this subject proposed to a young, (or even old) British artist, for his next appeal to public sensation at the Academy! But do you suppose that the young British artist is wiser and more civilized than Lippi's scholar, because his only idea of a patriarch is of a man with a long beard; of a doctor, the M.D. with the brass plate over the way; and of a virgin, Miss — of the — theatre?

Not that even Sandro was able, according to Vasari's report, to conduct the entire design himself. The proposer of the subject assisted him; and they made some modifications in the theology, which brought them both into trouble—so early did Sandro's innovating work begin, into which subjects our gossiping friend waives unnecessary inquiry, as follows.

"But although this picture is exceedingly beautiful, and ought to have put envy to shame, yet there were found certain malevolent and censorious persons who, not being able to affix any other blame to the work, declared that Matteo and Sandro had erred gravely in that matter, and had fallen into grievous heresy.

"Now, whether this be true or not, let none expect the judgment of that question from me: it shall suffice me to note that the figures executed by Sandro in that work are entirely worthy of praise; and that the pains he took in depicting those circles of the heavens must have been very great, to say nothing of the angels mingled with the other figures, or

of the various foreshortenings, all which are designed in a very good manner.

"About this time Sandro received a commission to paint a small picture with figures three parts of a braccio high,—the subject an Adoration of the Magi.

"It is indeed a most admirable work : the composition, the design, and the colouring are so beautiful that every artist who examines it is astonished ; and, at the time, it obtained so great a name in Florence, and other places, for the master, that Pope Sixtus IV. having erected the chapel built by him in his palace at Rome, and desiring to have it adorned with paintings, commanded that Sandro Botticelli should be appointed Superintendent of the work."

12. Vasari's words, "about this time," are evidently wrong. It must have been many and many a day after he painted Matteo's picture that he took such high standing in Florence as to receive the mastership of the works in the Pope's chapel at Rome. Of his position and doings there, I will tell you presently ; meantime, let us complete the story of his life.

"By these works Botticelli obtained great honour and reputation among the many competitors who were labouring with him, whether Florentines or natives of other cities, and received from the Pope a considerable sum of money ; but this he consumed and squandered totally, during his residence in Rome, where he lived without due care, as was his habit."

13. Well, but one would have liked to hear *how* he squandered his money, and whether he was without care—of other things than money.

It is just possible, Master Vasari, that Botticelli may have laid out his money at higher interest than you know of ; meantime, he is advancing in life and thought, and becoming less and less comprehensible to his biographer. And at length, having got rid, somehow, of the money he received from the Pope ; and finished the work he had to do, and uncovered himself, free in conscience, and empty in purse, he returned to Florence, where, "being a sophistical person, he made a commerce on a part of Dante, and drew the Inferno, and put it in ex-

graving, in which he consumed much time ; and not working for this reason, brought infinite disorder into his affairs."

14. Unpaid work, this engraving of Dante, you perceive,—consuming much time also, and not appearing to Vasari to be work at all. It is but a short sentence, gentlemen,—this, in the old edition of Vasari, and obscurely worded,—a very foolish person's contemptuous report of a thing to him totally incomprehensible. But the thing itself is out-and-out the most important fact in the history of the religious art of Italy. I can show you its significance in not many more words than have served to record it.

Botticelli had been painting in Rome ; and had expressly chosen to represent there,—being Master of Works, in the presence of the Defender of the Faith,—the foundation of the Mosaic law ; to his mind the Eternal Law of God,—that law of which modern Evangelicals sing perpetually their own original psalm, "Oh, how hate I Thy law ! it is my abomination all the day." Returning to Florence, he reads Dante's vision of the Hell created by its violation. He knows that the pictures he has painted in Rome cannot be understood by the people ; they are exclusively for the best trained scholars in the Church. Dante, on the other hand, can only be read in manuscript ; but the people could and would understand *his* lessons, if they were pictured in accessible and enduring form. He throws all his own lauded work aside,—all for which he is most honoured, and in which his now matured and magnificent skill is as easy to him as singing to a perfect musician. And he sets himself to a servile and despised labour,—his friends mocking him, his resources failing him, infinite 'disorder' getting into his affairs—of this world.

15. Never such another thing happened in Italy any more. Botticelli engraved her Pilgrim's Progress for her, putting himself in prison to do it. She would not read it when done. Raphael and Marc Antonio were the theologians for her money. Pretty Madonnas, and satyrs with abundance of tail,—let our pilgrim's progress be in *these* directions, if you please.

Botticelli's own pilgrimage, however, was now to be accomplished triumphantly, with such crowning blessings as Heaven might grant to him. In spite of his friends and his disordered affairs, he went his own obstinate way; and found another man's words worth engraving as well as Dante's; not without perpetuating, also, what he deemed worthy of his own.

16. What would that be, think you? His chosen works before the Pope in Rome?—his admired Madonnas in Florence?—his choirs of angels and thickets of flowers? Some few of these—yes, as you shall presently see; but “the best attempt of this kind from his hand is the Triumph of Faith, by Fra Girolamo Savonarola, of Ferrara, of whose sect our artist was so zealous a partisan that he totally abandoned painting, and not having any other means of living, he fell into very great difficulties. But his attachment to the party he had adopted increased; he became what was then called a *Piagnone*, or Mourner, and abandoned all labour; insomuch that, finding himself at length become old, being also very poor, he must have died of hunger had he not been supported by Lorenzo de' Medici, for whom he had worked at the small hospital of Volterra and other places, who assisted him while he lived, as did other friends and admirers of his talents.”

17. In such dignity and independence—having employed his talents not wholly at the orders of the dealer—died, a poor bedesman of Lorenzo de' Medici, the President of that high academy of art in Rome, whose Academicians were Perugino, Ghirlandajo, Angelico, and Signorelli; and whose students, Michael Angelo and Raphael.

‘A worthless, ill-conducted fellow on the whole,’ thinks Vasari, ‘with a crazy fancy for scratching on copper.’

Well, here are some of the scratches for you to see; only, first, I must ask you seriously for a few moments to consider what the two powers were, which, with this iron pen of his, he has set himself to reprove.

18. Two great forms of authority reigned over the entire civilized world, confessedly, and by name, in the middle ages.

They reign over it still, and must for ever, though at present very far from confessed ; and, in most places, ragingly denied.

The first power is that of the Teacher, or true Father ; the Father 'in God.' It may be—happy the children to whom it is—the actual father also ; and whose parents have been their tutors. But for the most part, it will be some one else who teaches them, and moulds their minds and brain. All such teaching, when true, being from above, and coming down from the Father of Lights, with whom is no variableness, neither shadow of turning, is properly that of the holy Catholic 'ἐκκλησία,' council, church, or papacy, of many fathers in God, not of one. Eternally powerful and divine ; revered of all humble and lowly scholars, in Jewry, in Greece, in Rome, in Gaul, in England, and beyond sea, from Arctic zone to zone.

The second authority is the power of National Law, enforcing justice in conduct by due reward and punishment. Power vested necessarily in magistrates capable of administering it with mercy and equity ; whose authority, be it of many or few, is again divine, as proceeding from the King of kings, and was acknowledged, throughout civilized Christendom, as the power of the Holy Empire, or Holy Roman Empire, because first throned in Rome ; but it is for ever also acknowledged, namelessly, or by name, by all loyal, obedient, just, and humble hearts, which truly desire that, whether for them or against them, the eternal equities and dooms of Heaven should be pronounced and executed ; and as the wisdom or word of their Father should be taught, so the will of their Father should be done, on earth, as it is in heaven.

19. You all here know what contention, first, and then what corruption and dishonour, had paralyzed these two powers before the days of which we now speak. Reproof, and either reform or rebellion, became necessary everywhere. The northern Reformers, Holbein, and Luther, and Henry, and Cromwell, set themselves to their task rudely, and, it might seem, carried it through. The southern Reformers, Dante, and Savonarola, and Botticelli, set hand to their task reverently, and, it seemed, did not by any means carry it through. But the end is not yet.

20. Now I shall endeavour to-day to set before you the art of Botticelli, especially as exhibiting the modesty of great imagination trained in reverence, which characterized the southern Reformers; and as opposed to the immodesty of narrow imagination, trained in self trust, which characterized the northern Reformers.

'The modesty of great *imagination*;' that is to say, of the power which conceives all things in true relation, and not only as they affect ourselves. I can show you this most definitely by taking one example of the modern, and unschooled temper, in Bewick;* and setting it beside Botticelli's treatment of the same subject of thought,—namely, the meaning of war, and the reforms necessary in the carrying on of war.

21. Both the men are entirely at one in their purpose. They yearn for peace and justice to rule over the earth, instead of the sword; but see how differently they will say what is in their hearts to the people they address. To Bewick, war was more an absurdity than it was a horror: he had not seen battle-fields, still less had he read of them, in ancient days. He cared nothing about heroes,—Greek, Roman, or Norman. What he knew, and saw clearly, was that Farmer Hodge's boy went out of the village one holiday afternoon, a fine young fellow, rather drunk, with a coloured riband in his hat; and came back, ten years afterwards, with one leg, one eye, an old red coat, and a tobacco pipe in the pocket of it. That is what he has got to say, mainly. So, for the pathetic side of the business, he draws you two old soldiers meeting as bricklayers' labourers; and for the absurd side of it, he draws a stone, sloping sideways with age, in a bare field, on which you can just read, out of a long inscription, the words "glorious victory;" but no one is there to read them,—only a jackass, who uses the stone to scratch himself against.

22. Now compare with this Botticelli's reproof of war. *He*

* I am bitterly sorry for the pain which my partial references to the man whom of all English artists whose histories I have read, I most esteem, have given to one remaining member of his family. I hope my meaning may be better understood after she has seen the close of this lecture.

had seen it, and often ; and between noble persons ;—knew the temper in which the noblest knights went out to it ;—knew the strength, the patience, the glory, and the grief of it. He would fain see his Florence in peace ; and yet he knows that the wisest of her citizens are her bravest soldiers. So he seeks for the ideal of a soldier, and for the greatest glory of war, that in the presence of these he may speak reverently, what he must speak. He does not go to Greece for his hero. He is not sure that even her patriotic wars were always right. But, by his religious faith, he cannot doubt the nobleness of the soldier who put the children of Israel in possession of their promised land, and to whom the sign of the consent of heaven was given by its pausing light in the valley of Ajalon. Must then setting sun and risen moon stay, he thinks, only to look upon slaughter ? May no soldier of Christ bid them stay otherwise than so ? He draws Joshua, but quitting his hold of the sword : its hilt rests on his bent knee ; and he kneels before the sun, not commands it ; and this is his prayer :—

“Oh, King of kings, and Lord of lords, who alone rulest always in eternity, and who correctest all our wanderings,—Giver of melody to the choir of angels, listen Thou a little to our bitter grief, and come and rule us, oh Thou highest King, with Thy love which is so sweet ! ”

Is not that a little better, and a little wiser, than Bewick's jackass ? Is it not also better, and wiser, than the sneer of modern science ? ‘What great men are we !—we, forsooth, can make almanacs, and know that the earth turns round. Joshua indeed ! Let us have no more talk of the old clothes-man.’

All Bewick's simplicity is in that ; but none of Bewick's understanding.

23. I pass to the attack made by Botticelli upon the guilt of wealth. So I had at first written ; but I should rather have written, the appeal made by him against the cruelty of wealth, then first attaining the power it has maintained to this day.

The practice of receiving interest had been confined, until this fifteenth century, with contempt and malediction, to the

profession, so styled, of usurers, or to the Jews. The merchants of Augsburg introduced it as a convenient and pleasant practice among Christians also; and insisted that it was decorous and proper even among respectable merchants. In the view of the Christian Church of their day, they might more reasonably have set themselves to defend adultery.* However, they appointed Dr. John Eck, of Ingoldstadt, to hold debates in all possible universities, at their expense, on the allowing of interest; and as these Augsburgers had in Venice their special mart, Fondaco, called of the Germans, their new notions came into direct collision with old Venetian ones, and were much hindered by them, and all the more, because, in opposition to Dr. John Eck, there was preaching on the other side of the Alps. The Franciscans, poor themselves, preached mercy to the poor: one of them, Brother Marco of San Gallo, planned the 'Mount of Pity,' for their defence, and the merchants of Venice set up the first in the world, against the German Fondaco. The dispute burned far on towards our own times. You perhaps have heard before of one Antonio, a merchant of Venice, who persistently retained the then obsolete practice of lending money gratis, and of the peril it brought him into with the usurers. But you perhaps did not before know why it was the flesh, or heart of flesh, in him, that they so hated.

24. Against this newly risen demon of authorized usury, Holbein and Botticelli went out to war together. Holbein, as we have partly seen in his designs for the Dance of Death, struck with all his soldier's strength.† Botticelli uses neither satire nor reproach. He turns altogether away from the criminals; appeals only to heaven for defence against them. He engraves the design which, of all his work, must have cost him hardest toil in its execution,—the Virgin praying to her Son in heaven for pity upon the poor: "For these are also my children."‡ Underneath, are the seven works of Mercy; and

* Read Ezekiel xviii.

† See also the account by Dr. Woltmann of the picture of the Triumph of Riches. 'Holbein and his Time,' p. 352.

‡ These words are engraved in the plate, as spoken by the Virgin.

in the midst of them, the building of the Mount of Pity : in the distance lies Italy, mapped in cape and bay, with the cities which had founded mounts of pity,—Venice in the distance, chief. Little seen, but engraved with the master's loveliest care, in the background there is a group of two small figures—the Franciscan brother kneeling, and an angel of Victory crowning him.

25. I call it an angel of Victory, observe, with assurance ; although there is no legend claiming victory, or distinguishing this angel from any other of those which adorn with crowns of flowers the nameless crowds of the blessed. For Botticelli has other ways of speaking than by written legends. I know by a glance at this angel that he has taken the action of it from a Greek coin ; and I know also that he had not, in his own exuberant fancy, the least need to copy the action of any figure whatever. So I understand, as well as if he spoke to me, that he expects me, if I am an educated gentleman, to recognize this particular action as a Greek angel's ; and to know that it is a temporal victory which it crowns.

26. And now farther, observe, that this classical learning of Botticelli's, received by him, as I told you, as a native element of his being, gives not only greater dignity and gentleness, but far wider range, to his thoughts of Reformation. As he asks for pity from the cruel Jew to the *poor* Gentile, so he asks for pity from the proud Christian to the *untaught* Gentile. Nay, for more than pity, for fellowship, and acknowledgment of equality before God. The learned men of his age in general brought back the Greek mythology as anti-Christian. But Botticelli and Perugino, as pre-Christian ; nor only as pre-Christian, but as the foundation of Christianity. But chiefly Botticelli, with perfect grasp of the Mosaic and classic theology, thought over and seized the harmonies of both ; and he it was who gave the conception of that great choir of the prophets and sibyls, of which Michael Angelo, more or less ignorantly borrowing it in the Sistine Chapel, in great part lost the meaning, while he magnified the aspect.

27. For, indeed, all Christian and heathen mythology had alike become to Michael Angelo only a vehicle for the display

of his own powers of drawing limbs and trunks : and having resolved, and made the world of his day believe, that all the glory of design lay in variety of difficult attitude, he flings the naked bodies about his ceiling with an upholsterer's ingenuity of appliance to the corners they could fit, but with total absence of any legible meaning. Nor do I suppose that one person in a million, even of those who have some acquaintance with the earlier masters, takes patience in the Sistine Chapel to conceive the original design. But Botticelli's mastership of the works evidently was given to him as a theologian, even more than as a painter ; and the moment when he came to Rome to receive it, you may hold for the crisis of the Reformation in Italy. The main effort to save her priesthood was about to be made by her wisest Reformer,—face to face with the head of her Church,—not in contest with him, but in the humblest subjection to him ; and in adornment of his own chapel for his own delight, and more than delight, if it might be.

28. Sandro brings to work, not under him, but with him, the three other strongest and worthiest men he knows, Perugino, Ghirlandajo, and Luca Signorelli. There is evidently entire fellowship in thought between Botticelli and Perugino. They two together plan the whole ; and Botticelli, though the master, yields to Perugino the principal place, the end of the chapel, on which is to be the Assumption of the Virgin. It was Perugino's favourite subject, done with his central strength ; assuredly the crowning work of his life, and of lovely Christian art in Europe.

Michael Angelo painted it out, and drew devils and dead bodies all over the wall instead. But there remains to us, happily, the series of subjects designed by Botticelli to lead up to this lost one.

29. He came, I said, not to attack, but to restore the Papal authority. To show the power of inherited honour, and universal claim of divine law, in the Jewish and Christian Church,—the law delivered first by Moses ; then, in final grace and truth, by Christ.

He designed twelve great pictures, each containing some

twenty figures the size of life, and groups of smaller ones scarcely to be counted. Twelve pictures,—six to illustrate the giving of the law by Moses; and six, the ratification and completion of it by Christ. Event by event, the jurisprudence of each dispensation is traced from dawn to close in this correspondence.

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|---------------------------------------|--|
| 1. Covenant of Circumcision. | 7. Covenant of Baptism. |
| 2. Entrance on his Ministry by Moses. | 8. Entrance on his Ministry by Christ. |
| 3. Moses by the Red Sea. | 9. Peter and Andrew by the Sea of Galilee. |
| 4. Delivery of Law on Sinai. | 10. Sermon on Mount. |
| 5. Destruction of Korah. | 11. Giving Keys to St. Peter. |
| 6. Death of Moses. | 12. Last Supper. |

Of these pictures, Sandro painted three himself, Perugino three, and the Assumption; Ghirlandajo one, Signorelli one, and Rosselli four.* I believe that Sandro intended to take the roof also, and had sketched out the main succession of its design; and that the prophets and sibyls which he meant to paint, he drew first small, and engraved his drawings afterwards, that some part of the work might be, at all events, thus communicable to the world outside of the Vatican.

30. It is not often that I tell you my beliefs; but I am forced here, for there are no dates to found more on. Is it not wonderful that among all the infinite mass of fool's thoughts about the "majestic works of Michael Angelo" in the Sistine Chapel, no slightly more rational person has ever asked what the chapel was first meant to be like, and how it was to be roofed?

Nor can I assure myself, still less you, that all these prophets and sibyls are Botticelli's. Of many there are two engravings, with variations: some are inferior in parts, many altogether. He signed none; never put grand tablets with 'S. B.' into his skies; had other letters than those to engrave, and no time to spare. I have chosen out of the series three of the sibyls, which have, I think, clear internal evidence of being his; and

* Cosimo Rosselli, especially chosen by the Pope for his gay colouring.

these you shall compare with Michael Angelo's. But first I must put you in mind what the sibyls were.

31. As the prophets represent the voice of God in man, the sibyls represent the voice of God in nature. They are properly all forms of one sibyl, *Διὸς Βουλῆ*, the counsel of God; and the chief one, at least in the Roman mind, was the Sibyl of Cumae. From the traditions of her, the Romans, and we through them, received whatever lessons the myth, or fact, of sibyl power has given to mortals.

How much have you received, or may you yet receive, think you, of that teaching? I call it the myth, or fact; but remember that, *as* a myth, it *is* a fact. This story has concentrated whatever good there is in the imagination of visionary powers in women, inspired by nature only. The traditions of witch and gipsy are partly its offshoots. You despise both, perhaps. But can you, though in utmost pride of your supreme modern wisdom, suppose that the character—say, even of so poor and far-fallen a sibyl as Meg Merrilies—is only the coinage of Scott's brain; or that, even being no more, it is valueless? Admit the figure of the Cumaeian Sibyl, in like manner, to be the coinage only of Virgil's brain. As such, it, and the words it speaks, are yet facts in which we may find use, if we are reverent to them.

To me, personally, (I must take your indulgence for a moment to speak wholly of myself,) they have been of the truest service—quite material and indisputable.

I am writing on St. John's Day, in the monastery of Assisi; and I had no idea whatever, when I sat down to my work this morning, of saying any word of what I am now going to tell you. I meant only to expand and explain a little what I said in my lecture about the Florentine engraving. But it seems to me now that I had better tell you what the Cumaeian Sibyl has actually done for me.

32. In 1871, partly in consequence of chagrin at the Revolution in Paris, and partly in great personal sorrow, I was struck by acute inflammatory illness at Matlock, and reduced to a state of extreme weakness; lying at one time unconscious for some hours, those about me having no hope of my life. I

have no doubt that the immediate cause of the illness was simply, eating when I was not hungry ; so that modern science would acknowledge nothing in the whole business but an extreme and very dangerous form of indigestion ; and entirely deny any interference of the Cumæan Sibyl in the matter.

I once heard a sermon by Dr. Guthrie, in Edinburgh, upon the wickedness of fasting. It was very eloquent and ingenious, and finely explained the superiority of the Scotch Free Church to the benighted Catholic Church, in that the Free Church saw no merit in fasting. And there was no mention, from beginning to end of the sermon, of even the existence of such texts as Daniel i. 12, or Matthew vi. 16.

Without the smallest merit, I admit, in fasting, I was nevertheless, reduced at Matlock to a state very near starvation ; and could not rise from my pillow, without being lifted, for some days. And in the first clearly pronounced stage of recovery, when the perfect powers of spirit had returned, while the body was still as weak as it well could be, I had three dreams, which made a great impression on me ; for in ordinary health my dreams are supremely ridiculous, if not unpleasant ; and in ordinary conditions of illness, very ugly, and always without the slightest meaning. But these dreams were all distinct and impressive, and had much meaning, if I chose to take it.

33. The first* was of a Venetian fisherman, who wanted me to follow him down into some water which I thought was too deep ; but he called me on, saying he had something to show me ; so I followed him ; and presently, through an opening, as if in the arsenal wall, he showed me the bronze horses of St. Mark's, and said, 'See, the horses are putting on their harness.'

The second was of a preparation at Rome, in St. Peter's, (or a vast hall as large as St. Peter's,) for the exhibition of a religious drama. Part of the play was to be a scene in which demons were to appear in the sky ; and the stage servants were arranging grey fictitious clouds, and painted fiends, for it, under the direction of the priests. There was a woman

* I am not certain of their order at this distance of time.

dressed in black, standing at the corner of the stage watching them, having a likeness in her face to one of my own dead friends ; and I knew somehow that she was not that friend, but a spirit ; and she made me understand, without speaking, that I was to watch, for the play would turn out other than the priests expected. And I waited ; and when the scene came on the clouds became real clouds, and the fiends real fiends, agitating them in slow quivering, wild and terrible, over the heads of the people and priests. I recollected distinctly, however, when I woke, only the figure of the black woman mocking the people, and of one priest in an agony of terror, with the sweat pouring from his brow, but violently scolding one of the stage servants for having failed in some ceremony, the omission of which, he thought, had given the devils their power.

The third dream was the most interesting and personal. Some one came to me to ask me to help in the deliverance of a company of Italian prisoners who were to be ransomed for money. I said I had no money. They answered, Yes, I had some that belonged to me as a brother of St. Francis, if I would give it up. I said I did not know even that I *was* a brother of St. Francis ; but I thought to myself, that perhaps the Franciscans of Fèssole, whom I had helped to make hay in their fields in 1845, had adopted me for one ; only I didn't see how the consequence of that would be my having any money. However, I said they were welcome to whatever I had ; and then I heard the voice of an Italian woman singing ; and I have never heard such divine singing before nor since ; the sounds absolutely strong and real, and the melody altogether lovely. If I could have written it ! But I could not even remember it when I woke,—only how beautiful it was.

34. Now these three dreams have, every one of them, been of much use to me since ; or so far as they have failed to be useful, it has been my own fault, and not theirs ; but the chief use of them at the time was to give me courage and confidence in myself, both in bodily distress, of which I had still not a little to bear ; and worse, much mental anxiety about matters supremely interesting to me, which were turning out

ill. And through all such trouble—which came upon me as I was recovering, as if it meant to throw me back into the grave,—I held out and recovered, repeating always to myself, or rather having always murmured in my ears, at every new trial, one Latin line,

Tu ne cede malis, sed contra fortior ito.

Now I had got this line out of the tablet in the engraving of Raphael's vision, and had forgotten where it came from. And I thought I knew my sixth book of Virgil so well, that I never looked at it again while I was giving these lectures at Oxford, and it was only here at Assisi, the other day, wanting to look more accurately at the first scene by the lake Avernus, that I found I had been saved by the words of the Cumæan Sibyl.

35. "*Quam tua te Fortuna sinet,*" the completion of the sentence, has yet more and continual teaching in it for me now ; as it has for all men. Her opening words, which have become hackneyed, and lost all present power through vulgar use of them, contain yet one of the most immortal truths ever yet spoken for mankind ; and they will never lose their power of help for noble persons. But observe, both in that lesson, "*Facilis descensus Averni,*" etc. ; and in the still more precious, because universal, one on which the strength of Rome was founded,—the burning of the books,—the Sibyl speaks only as the voice of Nature, and of her laws ;—not as a divine helper, prevailing over death ; but as a mortal teacher warning us against it, and strengthening us for our mortal time ; but not for eternity. Of which lesson her own history is a part, and her habitation by the Avernus lake. She desires immortality, fondly and vainly, as we do ourselves. She receives, from the love of her *refused* lover, Apollo, not immortality, but length of life ;—her years to be as the grains of dust in her hand. And even this she finds was a false desire ; and her wise and holy desire at last is—to die. She wastes away ; becomes a shade only, and a voice. The Nations ask her, What wouldst thou ? She answers, Peace ; only let my last words be true. "*L'ultimo mie parlar sie verace.*"

36. Therefore, if anything is to be conceived, rightly, and chiefly, in the form of the Cumaean Sibyl, it must be of fading virginal beauty, of enduring patience, of far-looking into futurity. "For after my death there shall yet return," she says, "another virgin."

*Jam redit et virgo ;—redeunt Saturnia regna,
Ultima Cumaei venit jam carminis aetas.*

Here then is Botticelli's Cumaean Sibyl. She is armed, for she is the prophetess of Roman fortitude ;—but her faded breast scarcely raises the corslet ; her hair floats, not falls, in waves like the currents of a river,—the sign of enduring life ; the light is full on her forehead : she looks into the distance as in a dream. It is impossible for art to gather together more beautifully or intensely every image which can express her true power, or lead us to understand her lesson.

37. Now you do not, I am well assured, know one of Michael Angelo's sibyls from another : unless perhaps the Delphian, whom of course he makes as beautiful as he can. But of this especially Italian prophetess, one would have thought he might, at least in some way, have shown that he knew the history, even if he did not understand it. She might have had more than one book, at all events, to burn. She might have had a stray leaf or two fallen at her feet. He could not indeed have painted her only as a voice ; but his anatomical knowledge need not have hindered him from painting her virginal youth, or her wasting and watching age, or her inspired hope of a holier future.

38. Opposite,—fortunately, photograph from the figure itself, so that you can suspect me of no exaggeration,—is Michael Angelo's Cumaean Sibyl, wasting away. It is by a grotesque and most strange chance that he should have made the figure of this Sybil, of all others in the chapel, the most fleshly and gross, even proceeding to the monstrous license of showing the nipples of the breast as if the dress were molded over them like plaster. Thus he paints the poor nymph beloved of Apollo,—the clearest and queenliest in prophecy and com-



PLATE VII.—FOR A TIME AND TIMES.





PLATE VIII.—THE NYMPH BELOVED OF APOLLO. MICHAEL ANGELO.





PLATE IX.—IN THE WOODS OF IDA.

mand of all the sybils,—as an ugly crone, with the arms of Goliath, poring down upon a single book.

39. There is one point of fine detail, however, in Botticelli's Cumæan Sibyl, and in the next I am going to show you, to explain which I must go back for a little while to the question of the direct relation of the Italian painters to the Greek. I don't like repeating in one lecture what I have said in another; but to save you the trouble of reference, must remind you of what I stated in my fourth lecture on Greek birds, when we were examining the adoption of the plume crests in armour, that the crest signifies command; but the diadem, *obedience*; and that every crown is primarily a diadem. It is the thing that binds, before it is the thing that honours.

Now all the great schools dwell on this symbolism. The long flowing hair is the symbol of life, and the *διάδημα* of the law restraining it. Royalty, or kingliness, over life, restraining and glorifying. In the extremity of restraint—in death, whether noble, as of death to Earth, or ignoble as of death to Heaven, the *διάδημα* is fastened with the mortcloth: "Bound hand and foot with grave-clothes, and the face bound about with the napkin."

40. Now look back to the first Greek head I ever showed you, used as the type of archaic sculpture in Aratra Pentelici, and then look at the crown in Botticelli's *Astrologia*. It is absolutely the Greek form,—even to the peculiar oval of the forehead; while the diadem—the governing law—is set with appointed stars—to rule the destiny and thought. Then return to the Cumæan Sibyl. She, as we have seen, is the symbol of enduring life—almost immortal. The diadem is withdrawn from the forehead—reduced to a narrow fillet—here, and the hair thrown free.

41. From the Cumæan Sibyl's diadem, traced only by points, turn to that of the Hellespontic, (Plate 9, opposite). I do not know why Botticelli chose her for the spirit of prophecy in old age; but he has made this the most interesting plate of the series in the definiteness of its connection with the work from Dante, which becomes his own prophecy in old age. The fantastic yet solemn treatment of the gnarled

wood occurs, as far as I know, in no other engravings but this and the illustrations to Dante ; and I am content to leave it, with little comment, for the reader's quiet study, as showing the exuberance of imagination which other men at this time in Italy allowed to waste itself in idle arabesque, restrained by Botticelli to his most earnest purposes ; and giving the withered tree-trunks hewn for the rude throne of the aged prophetess, the same harmony with her fading spirit which the rose has with youth, or the laurel with victory. Also in its weird characters, you have the best example I can show you of the orders of decorative design which are especially expressible by engraving, and which belong to a group of art-instincts scarcely now to be understood, much less recovered, (the influence of modern naturalistic imitation being too strong to be conquered)—the instincts, namely, for the arrangement of pure line, in labyrinthine intricacy, through which the grace of order may give continual clue. The entire body of ornamental design, connected with writing, in the middle ages seems as if it were a sensible symbol, to the eye and brain, of the methods of error and recovery, the minglings of crooked with straight, and perverse with progressive, which constitute the great problem of human morals and fate ; and when I chose the title for the collected series of these lectures, I hoped to have justified it by careful analysis of the methods of labyrinthine ornament, which, made sacred by Theseian traditions,* and beginning in imitation of physical truth, with the spiral waves of the waters of Babylon as the Assyrian carved them, entangled in their returns the eyes of men, on Greek vase and Christian manuscript—till they closed in the arabesques which sprang round the last luxury of Venice and Rome.

But the labyrinth of life itself, and its more and more interwoven occupation, become too manifold, and too difficult for me ; and of the time wasted in the blind lanes of it, perhaps that spent in analysis or recommendation of the art to which men's present conduct makes them insensible, has been chiefly cast away. On the walls of the little room where I finally revise

* Callimachus, 'Delos,' 304 etc.

this lecture,* hangs an old silken sampler of great-grandame's work : representing the domestic life of Abraham : chiefly the stories of Isaac and Ishmael. Sarah at her tent-door, watching with folded arms, the dismissal of Hagar : above, in a wilderness full of fruit trees, birds, and butterflies, little Ishmael lying at the root of a tree, and the spent bottle under another ; Hagar in prayer, and the angel appearing to her out of a wreathed line of gloomily undulating clouds, which, with a dark-rayed sun in the midst, surmount the entire composition in two arches, out of which descend shafts of (I suppose) beneficent rain ; leaving, however, room, in the corner opposite to Ishmael's angel, for Isaac's, who stays Abraham in the sacrifice : the ram in the thicket, the squirrel in the plum tree above him, and the grapes, pears, apples, roses, and daisies of the foreground, being all wrought with involution of such ingenious needle-work as may well rank, in the patience, the natural skill, and the innocent pleasure of it, with the truest works of Florentine engraving. Nay ; the actual tradition of many of the forms of ancient art is in many places evident,—as for instance in the spiral summits of the flames of the wood on the altar, which are like a group of first-springing fern. On the wall opposite is a smaller composition, representing Justice with her balance and sword, standing between the sun and moon, with a background of pinks, borage, and corncockle : a third is only a cluster of tulips and iris, with two Byzantine peacocks ; but the spirits of Penelope and Ariadne reign vivid in all the work—and the richness of pleasurable fancy is as great still, in these silken labours, as in the marble arches and golden roof of the cathedral of Monreal.

But what is the use of explaining or analyzing it ? Such work as this means the patience and simplicity of all feminine life ; and can be produced, among *us* at least, no more, Gothic tracery itself, another of the instinctive labyrinthine intricacies of old, though analyzed to its last section, has become now the symbol only of a foolish ecclesiastical sect, retained for their shibboleth, joyless and powerless for all good. The very labyrinth of the grass and flowers of our fields, though

* In the Old King's Arms Hotel, Lancaster.

dissected to its last leaf, is yet bitten bare, or trampled to slime, by the Minotaur of our lust; and for the traceried spire of the poplar by the brook, we possess but the four-square furnace tower, to mingle its smoke with heaven's thunder-clouds.*

We will look yet at one sampler more of the engraved work, done in the happy time when flowers were pure, youth simple, and imagination gay,—Botticelli's Libyan Sibyl.

Glance back first to the Hellespontic, noting the close fillet, and the cloth bound below the face, and then you will be prepared to understand the last I shall show you, and the loveliest of the southern Pythonesses.

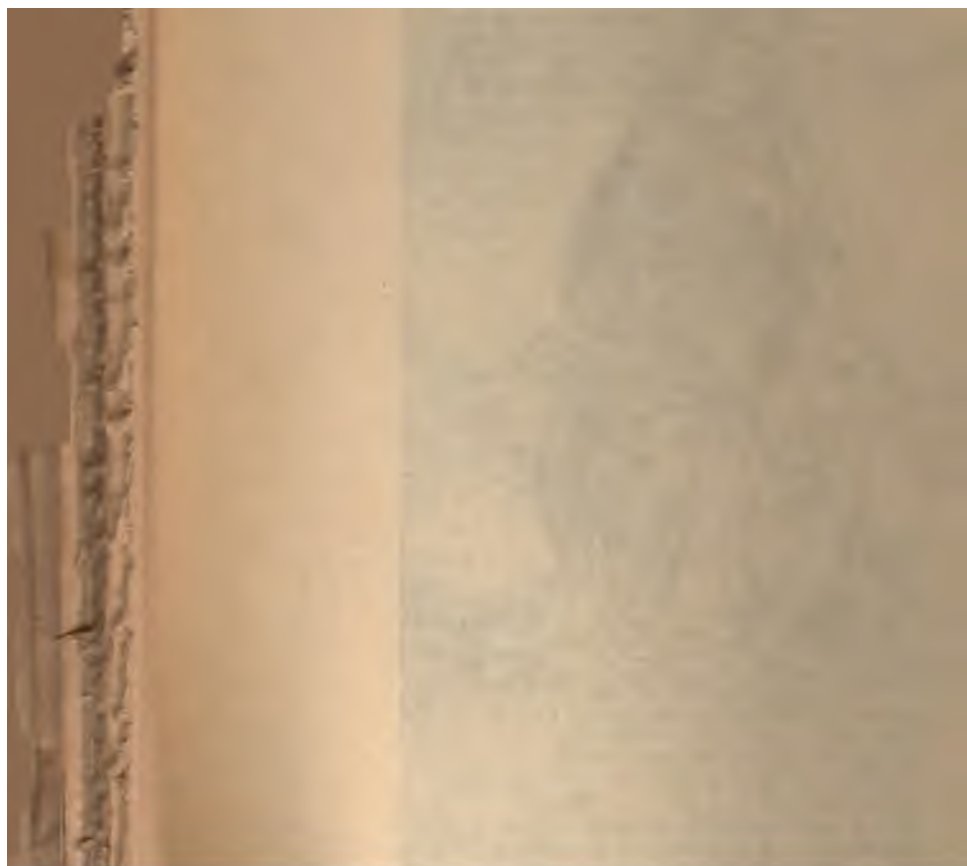
42. A less deep thinker than Botticelli would have made her parched with thirst, and burnt with heat. But the voice of God, through nature, to the Arab or the Moor, is not in the thirst, but in the fountain,—not in the desert, but in the grass of it. And this Libyan Sibyl is the spirit of wild grass and flowers, springing in desolate places.

You see, her diadem is a wreath of them; but the blossoms of it are not fastening enough for her hair, though it is not long yet—(she is only in reality a Florentine girl of fourteen or fifteen)—so the little darling knots it under her ears, and then makes herself a necklace of it. But though flowing hair and flowers are wild and pretty, Botticelli had not, in these only, got the power of Spring marked to his mind. Any girl might wear flowers; but few, for ornament, would be likely to wear grass. So the Sibyl shall have grass in her diadem; not merely interwoven and bending, but springing and strong. You thought it ugly and grotesque at first, did not you? It was made so, because precisely what Botticelli wanted you to look at.

* A manufacturer wrote to me the other day, "We don't *want* to make smoke!" Who said they did?—a hired murderer does not want to commit murder, but does it for sufficient motive. (Even our shipowners don't want to drown their sailors; they will only do it for sufficient motive.) If the dirty creatures *did* want to make smoke, there would be more excuse for them; and that they are not clever enough to consume it, is no praise to them. A man who can't help his hiccough leaves the room; why do they not leave the England they pollute?



PLATE X.—GRASS OF THE DESERT.



But that's not all. This conical cap of hers, with one bead at the top,—considering how fond the Florentines are of graceful head-dresses, this seems a strange one for a young girl. But, exactly as I know the angel of Victory to be Greek, at his Mount of Pity, so I know this head-dress to be taken from a Greek coin, and to be meant for a Greek symbol. It is the Petasus of Hermes—the mist of morning over the dew. Lastly, what will the Libyan Sibyl say to you? The letters are large on her tablet. Her message is the oracle from the temple of the dew: “The dew of thy birth is as the womb of the morning.”—“*Ecce venientem diem, et latentia aperientem, tenebit gremio gentium regina.*”

43. Why the daybreak came not then, nor yet has come, but only a deeper darkness; and why there is now neither queen nor king of nations, but every man doing that which is right in his own eyes, I would fain go on, partly to tell you, and partly to meditate with you: but it is not our work for to-day. The issue of the Reformation which these great painters, the scholars of Dante, began, we may follow, farther, in the study to which I propose to lead you, of the lives of Cimabue and Giotto, and the relation of their work at Assisi to the chapel and chambers of the Vatican.

44. To-day let me finish what I have to tell you of the style of southern engraving. What sudden bathos in the sentence, you think! So contemptible the question of style, then, in painting, though not in literature? You study the ‘style’ of Homer; the style, perhaps, of Isaiah; the style of Horace, and of Massillon. Is it so vain to study the style of Botticelli?

In all cases, it is equally vain, if you think of their style first. But know their purpose, and then, their way of speaking is worth thinking of. These apparently unfinished and certainly unfilled outlines of the Florentine,—clumsy work, as Vasari thought them,—as Mr. Otley and most of our English amateurs still think them,—are these good or bad engraving?

You may ask now, comprehending their motive, with some hope of answering or being answered rightly. And the an-

swer is, They are the finest gravers' work ever done yet by human hand. You may teach, by process of discipline and of years, any youth of good artistic capacity to engrave a plate in the modern manner ; but only the noblest passion, and the tenderest patience, will ever engrave one line like these of Sandro Botticelli.

45. Passion, and patience ! Nay, even these you may have to-day in England, and yet both be in vain. Only a few years ago, in one of our northern iron-foundries, a workman of intense power and natural art-faculty set himself to learn engraving ;—made his own tools ; gave all the spare hours of his laborious life to learn their use ; learnt it ; and engraved a plate which, in manipulation, no professional engraver would be ashamed of. He engraved his blast furnace, and the casting of a beam of a steam engine. This, to him, was the power of God,—it was his life.

No greater earnestness was ever given by man to promulgate a Gospel. Nevertheless, the engraving is absolutely worthless. The blast furnace *is not* the power of God ; and the life of the strong spirit was as much consumed in the flames of it, as ever driven slaves by the burden and heat of the day.

How cruel to say so, if he yet lives, you think ! No, my friends ; the cruelty will be in you, and the guilt, if, having been brought here to learn that God is your Light, you yet leave the blast furnace to be the only light of England.

It has been, as I said in the note above (p. 167), with extreme pain that I have hitherto limited my notice of our own great engraver and moralist, to the points in which the disadvantages of English art-teaching made him inferior to his trained Florentine rival. But, that these disadvantages were powerless to arrest or ignobly depress him ;—that however failing in grace and scholarship, he should never fail in truth or vitality ; and that the precision of his unerring hand*—

* I know no drawing so subtle as Bewick's, since the fifteenth century, except Holbein's and Turner's. I have been greatly surprised lately by the exquisite water-colour work in some of Stothard's smaller vignettes ; but he cannot set the line like Turner or Bewick.

his inevitable eye—and his rightly judging heart—should place him in the first rank of the great artists not of England only, but of all the world and of all time :—that *this* was possible to him, was simply because he lived a *country* life. Bewick himself, Botticelli himself, Apelles himself, and twenty times Apelles, condemned to slavery in the hellfire of the iron furnace, could have done—NOTHING. Absolute paralysis of all high human faculty *must* result from labour near fire. The poor engraver of the piston-rod had faculties—not like Bewick's, for if he had had those, he never would have endured the degradation ; but assuredly, (I know this by his work,) faculties high enough to have made him one of the most accomplished figure painters of his age. And they are scorched out of him, as the sap from the grass in the oven : while on his Northumberland hill-sides, Bewick grew into as stately life as their strongest pine.

And therefore, in words of his, telling consummate and unchanging truth concerning the life, honour, and happiness of England, and bearing directly on the points of difference between class and class which I have not dwelt on without need, I will bring these lectures to a close.

“I have always, through life, been of opinion that there is no business of any kind that can be compared to that of a man who farms his own land. It appears to me that every earthly pleasure, with health, is within his reach. But numbers of these men (the old statesmen) were grossly ignorant, and in exact proportion to that ignorance they were sure to be offensively proud. This led them to attempt appearing above their station, which hastened them on to their ruin ; but, indeed, this disposition and this kind of conduct invariably leads to such results. There were many of these lairds on Tyneside ; as well as many who held their lands on the tenure of ‘suit and service,’ and were nearly on the same level as the lairds. Some of the latter lost their lands (not fairly, I think) in a way they could not help ; many of the former, by their misdirected pride and folly, were driven into towns, to slide away into nothingness, and to sink into oblivion, while their ‘ha’ houses’ (halls), that ought to have remained in their families

from generation to generation, have mouldered away. I have always felt extremely grieved to see the ancient mansions of many of the country gentlemen, from somewhat similar causes, meet with a similar fate. The gentry should, in an especial manner, prove by their conduct that they are guarded against showing any symptom of foolish pride, at the same time that they soar above every meanness, and that their conduct is guided by truth, integrity, and patriotism. If they wish the people to partake with them in these good qualities, they must set them the example, without which no real respect can ever be paid to them. Gentlemen ought never to forget the respectable station they hold in society, and that they are the natural guardians of public morals and may with propriety be considered as the head and the heart of the country, while 'a bold peasantry' are, in truth, the arms, the sinews, and the strength of the same; but when these last are degraded, they soon become dispirited and mean, and often dishonest and useless.

* * * * *

"This singular and worthy man * was perhaps the most invaluable acquaintance and friend I ever met with. His moral lectures and advice to me formed a most important succedaneum to those imparted by my parents. His wise remarks, his detestation of vice, his industry, and his temperance,

* Gilbert Gray, bookbinder. I have to correct the inaccurate—and very harmfully inaccurate, expression which I used of Bewick, in *Love's Meinie*, 'a printer's lad at Newcastle.' His first master was a goldsmith and engraver, else he could never have been an artist. I am very heartily glad to make this correction, which establishes another link of relation between Bewick and Botticelli; but my error was partly caused by the impression which the above description of his "most invaluable friend" made on me, when I first read it.

Much else that I meant to correct, or promised to explain, in this lecture, must be deferred to the Appendix; the superiority of the Tuscan to the Greek Aphrodite I may perhaps, even at last, leave the reader to admit or deny as he pleases, having more important matters of debate on hand. But as I mean only to play with Proserpina during the spring, I will here briefly anticipate a statement I mean in the Appendix to enforce, namely, of the extreme value of coloured copies by hand, or paintings whose excellence greatly consists in colour, as auxiliary to en-

crowned with a most lively and cheerful disposition, altogether made him appear to me as one of the best of characters. In his workshop I often spent my winter evenings. This was also the case with a number of young men who might be considered as his pupils; many of whom, I have no doubt, he directed into the paths of truth and integrity, and who revered his memory through life. He rose early to work, lay down when he felt weary, and rose again when refreshed. His diet was of the simplest kind; and he ate when hungry, and drank when dry, without paying regard to meal-times. By steadily pursuing this mode of life he was enabled to accumulate sums of money—from ten to thirty pounds. This enabled him to get books, of an entertaining and moral tendency, printed and circulated at a cheap rate. His great object was, by every possible means, to promote honourable feelings in the minds of youth, and to prepare them for becoming good members of society. I have often discovered that he did not overlook ingenious mechanics, whose misfortunes—perhaps mismanagement—had led them to a lodging in Newgate. To these he directed his compassionate eye, and for the deserving (in his estimation), he paid their debt, and set them at liberty. He felt hurt at seeing the hands of an ingenious man tied up in

gravings of them. The prices now given without hesitation for nearly worthless original drawings by first-rate artists, would obtain for the misguided buyers, in something like a proportion of ten to one, most precious copies of drawings which can only be represented at all in engraving by entire alteration of their treatment, and abandonment of their finest purposes. I feel this so strongly that I have given my best attention, during upwards of ten years, to train a copyist to perfect fidelity in rendering the work of Turner; and having now succeeded in enabling him to produce facsimilies so close as to look like replicas, facsimilies which I must sign with my own name and his, in the very work of them, to prevent their being sold for real Turner vignettes, I can obtain no custom for him, and am obliged to leave him to make his bread by any power of captivation his original sketches may possess in the eyes of a public which maintains a nation of copyists in Rome, but is content with black and white renderings of great English art; though there is scarcely one cultivated English gentleman or lady who has not been twenty times in the Vatican, for once that they have been in the National Gallery.

ARIADNE FLORENTINA.

son, where they were of no use either to himself or to the community. This worthy man had been educated for a priest; but he would say to me, 'Of a "trouth," Thomas, I did not see their ways.' So he gave up the thoughts of being a priest, and bent his way from Aberdeen to Edinburgh, where he engaged himself to Allan Ramsay, the poet, then a bookseller at the latter place, in whose service he was both shopman and bookbinder. From Edinburgh he came to Newcastle. Gilbert had had a liberal education bestowed upon him. He had read a great deal, and had reflected upon what he had read. His, with his retentive memory, enabled him to be a pleasant and communicative companion. I lived in habits of intimacy with him to the end of his life; and, when he died, I, with others of his friends, attended his remains to the grave at the Ballast Hills."

And what graving on the sacred cliffs of Egypt ever honoured them, as that grass-dimmed furrow does the mounds of our Northern land?

NOTES.

I. The following letter, from one of my most faithful readers, corrects an important piece of misinterpretation in the text. The waving of the reins must be only in sign of the fluctuation of heat round the Sun's own chariot :—

“Spring Field, Ambleside,
“February 11, 1875.

“Dear Mr. Ruskin,—Your fifth lecture on Engraving I have to hand.

“Sandro intended those wavy lines meeting under the Sun's right * hand, (Plate V.) primarily, no doubt, to represent the four ends of the four reins dangling from the Sun's hand. The flames and rays are seen to continue to radiate from the platform of the chariot between and beyond these ends of the reins, and over the knee. He may have wanted to acknowledge that the warmth of the earth was Apollo's, by making these ends of the reins spread out separately and wave, and thereby enclose a form like a flame. But I cannot think it.

“Believe me,

“Ever yours truly,

CHAS. WM. SMITH.”

II. I meant to keep labyrinthine matters for my Appendix ; but the following most useful byewords from Mr. Tyrrwhitt had better be read at once :—

“In the matter of Cretan Labyrinth, as connected by Vir-

* “Would not the design have looked better, to us, on the plate than on the print ? On the plate, the reins would be in the left hand ; and the whole movement be from the left to the right ? The two different forms that the radiance takes would symbolize respectively heat and light, would they not ? ”

gil with the Ludus Trojæ, or equestrian game of winding and turning, continued in England from twelfth century ; and having for last relic the maze * called 'Troy Town,' at Troy farm, near Somerton, Oxfordshire, which itself resembles the circular labyrinth on a coin of Cnossus in 'Fors Clavigera.'

"The connecting quotation from Virg., *Æn.*, v., 588, is as follows :

* Ut quondam Creta fertur Labyrinthus in alta
Parietibus textum cæcis iter, ancipitemque
Mille viis habuisse dolum, qua signa sequendi
Falleret indepressus et inremeabilis error.
Haud alio Teucrûn nati vestigia cursu
Impediunt, texuntque fagas et prælia ludo,
Delphinum similes.' "

Labyrinth of Ariadne, as cut on the Downs by shepherds from time immemorial,—

Shakspeare, 'Midsummer Night's Dream,' Act ii. sc. 2:

" Oberon. The nine-men's morris† is filled up with mud ;
And the quaint mazes in the wanton green
By lack of tread are undistinguishable."

The following passage, 'Merchant of Venice,' Act iii., sc. 2, confuses (to all appearance) the Athenian tribute to Crete, with the story of Hesione : and may point to general confusion in the Elizabethan mind about the myths :

" Portia. with much more love
Than young Alcides, when he did reduce
The virgin-tribute paid by howling Troy
To the sea monster." ‡

Theseus is the Attic Hercules, however ; and Troy may have been a sort of house of call for mythical monsters, in the view of midland shepherds.

* Strutt, pp. 97-8, ed. 1801.

† Explained as "a game still played by the shepherds, cowkeepers," etc., in the midland counties.

‡ See *Iliad*, 20, 145.





PLATE XI.—OBEDIENTE DOMINO VOCI HOMINIS.

APPENDIX.

ARTICLE I.

NOTES ON THE PRESENT STATE OF ENGRAVING IN ENGLAND.

I HAVE long deferred the completion of this book, because I had hoped to find time to show, in some fulness, the grounds for my conviction that engraving, and the study of it, since the development of the modern finished school, have been ruinous to European knowledge of art. But I am more and more busied in what I believe to be better work, and can only with extreme brevity state here the conclusions of many years' thought.

These, in several important particulars, have been curiously enforced on me by the carelessness shown by the picture dealers about the copies from Turner which it has cost Mr. Ward and me * fifteen years of study together to enable ourselves to make. "They are only copies," say they,—“nobody will look at them.”

It never seems to occur even to the most intelligent persons that an engraving also is 'only a copy,' and a copy done with refusal of colour, and with disadvantage of means in rendering shade. But just because this utterly inferior copy can be reduplicated, and introduces a different kind of skill in another material, people are content to lose all the composition, and all the charm, of the original,—so far as these depend on the chief gift of a *painter*,—colour; while they are gradually misled into attributing to the painter himself qualities impertinently added by the engraver to make his plate popular: and, which is far worse, they are as gradually and

* See note to the close of this article, p. 152.

subtly prevented from looking, in the original, for the qualities which engraving could never render. Further, it continually happens that the very best colour-compositions engrave worst; for they often extend colours over great spaces at equal pitch, and the green is as dark as the red, and the blue as the brown; so that the engraver can only distinguish them by lines in different directions, and his plate becomes a vague and dead mass of neutral tint; but a bad and forced piece of colour, or a piece of work of the Bolognese school, which is everywhere black in the shadows, and colourless in the lights, will engrave with great ease, and appear spirited and forcible. Hence engravers, as a rule, are interested in reproducing the work of the worst schools of painting.

Also, the idea that the merit of an engraving consisted in light and shade, has prevented the modern masters from even attempting to render works dependent mainly on outline and expression; like the early frescoes, which should indeed have been the objects of their most attentive and continual skill: for outline and expression are entirely within the scope of engraving; and the scripture histories of an aisle of a cloister might have been engraved to perfection, with little more pains than are given by ordinary workmen to round a limb by Correggio, or imitate the texture of a dress by Sir Joshua,—and both, at last, inadequately.

I will not lose more time in asserting or lamenting the mischief arising out of the existing system: but will rapidly state what the public should now ask for.

1. Exquisitely careful engraved outlines of all remaining frescoes of the thirteenth, fourteenth, and fifteenth centuries in Italy, with so much pale tinting as may be explanatory of their main masses; and with the local darks and local lights brilliantly relieved. The Arundel Society have published some meritorious plates of this kind from Angelico,—not, however, paying respect enough to the local colours, but conventionalizing the whole too much into outline.

2. Finished small plates for book illustration. The cheap woodcutting and etching of popular illustrated books have been endlessly mischievous to public taste: they first obtained

their power in a general reaction of the public mind from the insipidity of the lower school of line engraving, brought on it by servile persistence in hack work for ignorant publishers. The last dregs of it may still be seen in the sentimental landscapes engraved for cheap ladies' pocket-books. But the woodcut can never, educationally, take the place of serene and accomplished line engraving; and the training of young artists in whom the gift of delineation prevails over their sense of colour, to the production of scholarly, but small plates, with their utmost honour of skill, would give a hitherto unconceived dignity to the character and range of our popular literature.

3. Vigorous mezzotints from pictures of the great masters, which originally present noble contrasts of light and shade. Many Venetian works are magnificent in this character.

4. Original design by painters themselves, decisively engraved in few lines—(*not etched*); and with such insistence by dotted work on the main contours as we have seen in the examples given from Italian engraving.

5. On the other hand, the men whose quiet patience and exquisite manual dexterity are at present employed in producing large and costly plates, such as that of the *Belle Jardinière* de Florence, by M. Boucher Desnoyers, should be entirely released from their servile toil, and employed exclusively in producing coloured copies, or light drawings, from the original work. The same number of hours of labour, applied with the like conscientious skill, would multiply precious likenesses of the real picture, full of subtle veracities which no steel line could approach, and conveying, to thousands, true knowledge and unaffected enjoyment of painting; while the finished plate lies uncared for in the portfolio of the virtuoso, serving only, so far as it is seen in the print-seller's window by the people, to make them think that sacred painting must always be dull, and unnatural.

I have named the above engraving, because, for persons wishing to study the present qualities and methods of line-work, it is a pleasant and sufficient possession, uniting every variety of texture with great serenity of unforced effect, and

exhibiting every possible artifice and achievement in the distribution of even and rugged, or of close and open line ; artifices for which,—while I must yet once more and emphatically repeat that they are illegitimate, and could not be practised in a revived school of classic art,—I would fain secure the reader's reverent admiration, under the conditions exacted by the school to which they belong. Let him endeavour, with the finest point of pen or pencil he can obtain, to imitate the profile of this Madonna in its relief against the grey background of the water surface ; let him examine, through a good lens, the way in which the lines of the background are ended in a lance-point as they approach it ; the exact equality of depth of shade being restored by inserted dots, which prepare for the transition to the manner of shade adopted in the flesh : then let him endeavour to trace with his own hand some of the curved lines at the edge of the eyelid, or in the rounding of the lip ; or if these be too impossible, even a few of the quiet undulations which gradate the folds of the hood behind the hair ; and he will, I trust, begin to comprehend the range of delightful work which would be within the reach of such an artist, employed with more tractable material on more extended subject.

If, indeed, the present system were capable of influencing the mass of the people, and enforcing among them the subtle attention necessary to appreciate it, something might be pleaded in defence of its severity. But all these plates are entirely above the means of the lower middle classes, and perhaps not one reader in a hundred can possess himself, for the study I ask of him, even of the plate to which I have just referred. What, in the stead of such, he can and does possess, let him consider,—and, if possible, just after examining the noble qualities of this conscientious engraving.

Take up, for an average specimen of modern illustrated works, the volume of Dickens's '*Master Humphrey's Clock*,' containing '*Barnaby Rudge*.'

You have in that book an entirely profitless and monstrous story, in which the principal characters are a coxcomb, an idiot, a madman, a savage blackguard, a foolish tavern-keeper, a mean

old maid, and a conceited apprentice,—mixed up with a certain quantity of ordinary operative pastoral stuff, about a pretty Dolly in ribands, a lover with a wooden leg, and an heroic locksmith. For these latter, the only elements of good, or life, in the filthy mass of the story,* observe that the author must filch the wreck of those old times of which we fiercely and frantically destroy every living vestige, whenever it is possible. You cannot have your Dolly Varden brought up behind the counter of a railway station; nor your jolly locksmith trained at a Birmingham brass-foundry. And of these materials, observe that you can only have the ugly ones illustrated. The cheap popular art cannot draw for you beauty, sense, or honesty; and for Dolly Varden, or the locksmith, you will look through the vignettes in vain. But every species of distorted folly and vice,—the idiot, the blackguard, the coxcomb, the paltry fool, the degraded woman,—are pictured for your honorable pleasure in every page, with clumsy caricature, struggling to render its dulness tolerable by insisting on defect,—if perchance a penny or two more may be coined out of the Cockney reader's itch for loathsomeness.

Or take up, for instance of higher effort, the "Cornhill Magazine" for this month, July, 1876. It has a vignette of Venice for an illuminated letter. That is what your decorative art has become, by help of Kensington! The letter to be produced is a T. There is a gondola in the front of the design, with the canopy slipped back to the stern like a saddle over a horse's tail. There is another in the middle distance, all gone to seed at the prow, with its gondolier emaciated into an oar, at the stern; then there is a Church of the Salute, and a Ducal palace,—in which I beg you to observe all the felicity and dexterity of modern cheap engraving; finally, over the Ducal palace there is something, I know not in the least what meant for, like an umbrella dropping out of a balloon, which is the ornamental letter T. Opposite this ornamental design, there is an engraving of two young ladies and a parasol, between

* The raven, however, like all Dickens's animals, is perfect; and I am the more angry with the rest because I have every now and then to open the book to look for him.

two trunks of trees. The white face and black feet of the principal young lady, being the points of the design, are done with as much care,—not with as much dexterity,—as an ordinary sketch of Dumourier's in Punch. The young lady's dress, the next attraction, is done in cheap white and black cutting, with considerably less skill than that of any ordinary tailor's or milliner's shop-book pattern drawing. For the other young lady, and the landscape, take your magnifying glass, and look at the hacked wood that forms the entire shaded surface—one mass of idiotic scrabble, without the remotest attempt to express a single leaf, flower, or clod of earth. It is such landscape as the public sees out of its railroad window at sixty miles of it in the hour,—and good enough for such a public.

Then turn to the last—the poetical plate, p. 122: “Lifts her—lays her down with care.” Look at the gentleman with the spade, promoting the advance, over a hillock of hay, of the reposing figure in the black-sided tub. Take your magnifying glass to *that*, and look what a dainty female arm and hand your modern scientific and anatomical schools of art have provided you with! Look at the tender horizontal flux of the sea round the promontory point above. Look at the tender engraving of the linear light on the divine horizon, above the ravenous sea-gull. Here is Development and Progress for you, from the days of Perugino's horizon, and Dante's daybreaks! Truly, here it seems

“Si che le bianche e le vermiglie guance
Per troppa etate divenivan rance.”

I have chosen no gross or mean instances of modern work. It is one of the saddest points connected with the matter that the designer of this last plate is a person of consummate art faculty, but bound to the wheel of the modern Juggernaut, and broken on it. These woodcuts, for ‘Barnaby Rudge’ and the ‘Cornhill Magazine,’ are favourably representative of the entire illustrative art industry of the modern press,—industry enslaved to the ghastly service of catching the last gleams in the glued eyes of the daily more bestial English mob,—rail-

road born and bred, which drags itself about the black world it has withered under its breath, in one eternal grind and shriek,—gobbling,—staring,—chattering,—giggling,—trampling out every vestige of national honour and domestic peace, wherever it sets the staggering hoof of it ; incapable of reading, of hearing, of thinking, of looking,—capable only of greed for money, lust for food, pride of dress, and the prurient itch of momentary curiosity for the politics last announced by the newsmonger, and the religion last rolled by the chemist into electuary for the dead.

In the miserably competitive labour of finding new stimulus for the appetite—daily more gross—of this tyrannous mob, we may count as lost, beyond any hope, the artists who are dull, docile, or distressed enough to submit to its demands ; and we may count the dull and the distressed by myriads ;—and among the docile, many of the best intellects we possess. The few who have sense and strength to assert their own place and supremacy, are driven into discouraged disease by their isolation, like Turner and Blake ; the one abandoning the design of his ‘*Liber Studiorum*’ after imperfectly and sadly, against total public neglect, carrying it forward to what it is,—monumental, nevertheless, in landscape engraving ; the other producing, with one only majestic series of designs from the book of Job, nothing for his life’s work but coarsely iridescent sketches of enigmatic dream.

And, for total result of our English engraving industry during the last hundred and fifty years, I find that practically at this moment I cannot get a *single* piece of true, sweet, and comprehensible art, to place for instruction in any children’s school ! I can get, for ten pounds apiece, well-engraved portraits of Sir Joshua’s beauties showing graceful limbs through flowery draperies ; I can get—dirt-cheap—any quantity of Dutch flats, ditches, and hedges, enlivened by cows chewing the cud, and dogs behaving indecently ; I can get heaps upon heaps of temples, and forums, and altars, arranged as for academical competition, round seaports, with curled-up ships that only touch the water with the middle of their bottoms. I can get, at the price of lumber, any quantity of British

squires flourishing whips and falling over hurdles ; and, in suburban shops, a dolorous variety of widowed mothers nursing babies in a high light, with the Bible on a table, and baby's shoes on a chair. Also, of cheap prints, painted red and blue, of Christ blessing little children, of Joseph and his brethren, the infant Samuel, or Daniel in the lion's den, the supply is ample enough to make every child in these islands think of the Bible as a somewhat dull story-book, allowed on Sunday ;—but of trained, wise, and worthy art, applied to gentle purposes of instruction, no single example can be found in the shops of the British printseller or bookseller. And after every dilettante tongue in European society has filled drawing-room and academy alike with idle clatter concerning the divinity of Raphael and Michael Angelo, for these last hundred years, I cannot at this instant, for the first school which I have some power of organizing under St. George's laws, get a good print of Raphael's Madonna of the tribune, or an ordinarily intelligible view of the side and dome of St. Peter's !

And there are simply no words for the mixed absurdity and wickedness of the present popular demand for art, as shown by its supply in our thoroughfares. Abroad, in the shops of the Rue de Rivoli, brightest and most central of Parisian streets, the putrescent remnant of what was once Catholicism promotes its poor gilded pedlars' ware of nativity and crucifixion into such honourable corners as it can find among the more costly and studious illuminations of the brothel : and although, in Pall Mall, and the Strand, the large-margined Landseer,—Stanfield,—or Turner-proofs, in a few stately windows, still represent, uncared-for by the people, or inaccessible to them, the power of an English school now wholly perished,—these are too surely superseded, in the windows that stop the crowd, by the thrilling attraction with which Doré, Gérôme, and Tadema have invested the gambling table, the duelling ground, and the arena ; or by the more material and almost tangible truth with which the apothecary-artist stereographs the stripped actress, and the railway mound.

Under these conditions, as I have now repeatedly asserted,

no professorship, nor school, of art can be of the least use to the general public. No race can understand a visionary landscape, which blasts its real mountains into ruin, and blackens its river-beds with foam of poison. Nor is it of the least use to exhibit ideal Diana at Kensington, while substantial Phryne may be worshipped in the Strand. The only recovery of our art-power possible,—nay, when once we know the full meaning of it, the only one desirable,—must result from the purification of the nation's heart, and chastisement of its life : utterly hopeless now, for our adult population, or in our large cities, and their neighbourhood. But, so far as any of the sacred influence of former design can be brought to bear on the minds of the young, and so far as, in rural districts, the first elements of scholarly education can be made pure, the foundation of a new dynasty of thought may be slowly laid. I was strangely impressed by the effect produced in a provincial seaport school for children, chiefly of fishermen's families, by the gift of a little coloured drawing of a single figure from the *Paradise* of Angelico in the *Accademia* of Florence. The drawing was wretched enough seen beside the original : I had only bought it from the poor Italian copyist for charity ; but, to the children, it was like an actual glimpse of heaven ; they rejoiced in it with pure joy, and their mistress thanked me for it more than if I had sent her a whole library of good books. Of such copies, the grace-giving industry of young girls, now worse than lost in the spurious charities of the bazaar, or selfish ornamentations of the drawing-room, might, in a year's time, provide enough for every dame-school in England ; and a year's honest work of the engravers employed on our base novels, might represent to our advanced students every frescoed legend of philosophy and morality extant in Christendom.

For my own part, I have no purpose, in what remains to me of opportunity, either at Oxford or elsewhere, to address any farther course of instruction towards the development of existing schools. After seeing the stream of the Teviot as black as ink, and a putrid carcase of a sheep lying in the dry channel of the Jed, under Jedburgh Abbey, (the entire strength

of the summer stream being taken away to supply a single mill,) I know, finally, what value the British mind sets on the 'beauties of nature,' and shall attempt no farther the excitement of its enthusiasm in that direction. I shall indeed endeavour to carry out, with Mr. Ward's help, my twenty year's held purpose of making the real character of Turner's work known, to the persons who, formerly interested by the engravings from him, imagined half the merit was of the engraver's giving. But I know perfectly that to the general people, trained in the midst of the ugliest objects that vice can design, in houses, mills, and machinery, *all* beautiful form and colour is as invisible as the seventh heaven. It is not a question of appreciation at all; the thing is physically invisible to them, as human speech is inaudible during a steam whistle.

And I shall also use all the strength I have to convince those, among our artists of the second order, who are wise and modest enough not to think themselves the matches of Turner or Michael Angelo, that in the present state of art they only waste their powers in endeavouring to produce original pictures of human form or passion. Modern aristocratic life is too vulgar, and modern peasant life too unhappy, to furnish subjects of noble study; while, even were it otherwise, the multiplication of designs by painters of second-rate power is no more desirable than the writing of music by inferior composers. They may, with far greater personal happiness, and incalculably greater advantage to others, devote themselves to the affectionate and sensitive copying of the works of men of just renown. The dignity of this self-sacrifice would soon be acknowledged with sincere respect, for copies produced by men working with such motive would differ no less from the common trade-article of the galleries than the rendering of music by an enthusiastic and highly-trained executant differs from the grinding of a street organ. And the change in the tone of the public feeling, produced by familiarity with such work, would soon be no less great than in their musical enjoyment, if having been accustomed only to hear black Christys, blind fiddlers, and hoarse beggars scrape or howl about their

streets, they were permitted daily audience of faithful and gentle orchestral rendering of the work of the highest classical masters.

I have not, until very lately, rightly appreciated the results of the labour of the Arundel Society in this direction. Although, from the beginning, I have been honoured in being a member of its council, my action has been hitherto rather of check than help, because I thought more of the differences between our copies and the great originals, than of their unquestionable superiority to anything the public could otherwise obtain.

I was practically convinced of their extreme value only this last winter, by staying at the house of a friend in which the Arundel engravings were the principal decoration; and where I learned more of Masaccio from the Arundel copy of the contest with Simon Magus, than in the Brancacci chapel itself; for the daily companionship with the engraving taught me subtleties in its composition which had escaped me in the multitudinous interest of visits to the actual fresco.

But the work of the Society has been sorely hindered hitherto, because it has had at command only the skill of copyists trained in foreign schools of colour, and accustomed to meet no more accurate requisitions than those of the fashionable traveller. I have always hoped for, and trust at last to obtain, co-operation with our too mildly laborious copyists, of English artists possessing more brilliant colour faculty; and the permission of our subscribers to secure for them the great ruins of the noble past, undesecrated by the trim, but treacherous, plastering of modern emendation.

Finally, I hope to direct some of the antiquarian energy often to be found remaining, even when love of the picturesque has passed away, to encourage the accurate delineation and engraving of historical monuments, as a direct function of our schools of art. All that I have generally to suggest on this matter has been already stated with sufficient clearness in the first of my inaugural lectures at Oxford: and my forthcoming 'Elements of Drawing,' will contain all the directions I can give in writing as to methods of work for such purpose. The

publication of these has been hindered, for at least a year, by the abuses introduced by the modern cheap modes of printing engravings. I find the men won't use any ink but what pleases them, nor print but with what pressure pleases them; and if I can get the foreman to attend to the business, and choose the ink right, the men change it the moment he leaves the room, and threaten to throw up the job when they are detected. All this, I have long known well, is a matter of course, in the outcome of modern principles of trade; but it has rendered it hitherto impossible for me to produce illustrations, which have been ready, as far as my work or that of my own assistants is concerned, for a year and a half. Any one interested in hearing of our progress—or arrest, may write to my Turner copyist, Mr. Ward:* and, in the meantime, they can help my designs for art education best by making these Turner copies more generally known; and by determining, when they travel, to spend what sums they have at their disposal, not in fady photography, but in the encouragement of any good *water-colour* and *pencil* draughtsmen whom they find employed in the *galleries* of Europe.

ARTICLE II.

DETACHED NOTES.

I.

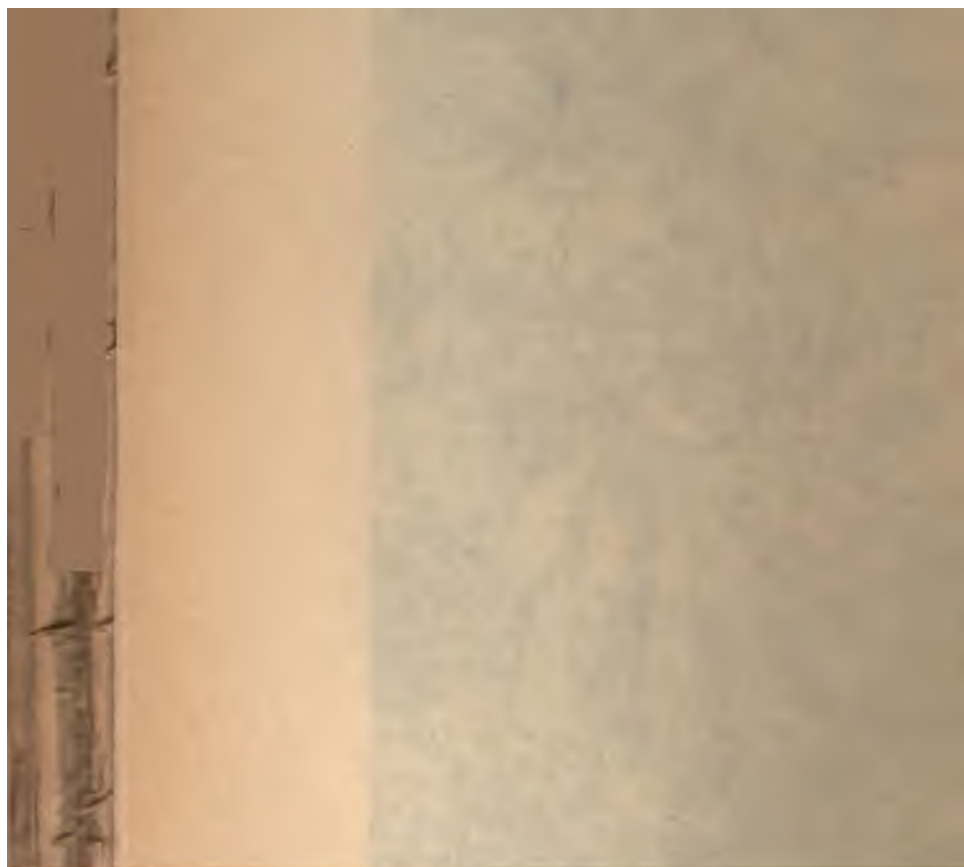
On the series of Sibyl engravings attributed to Botticelli.

SINCE I wrote the earlier lectures in this volume, I have been made more doubtful on several points which were embarrassing enough before, by seeing some better, (so-called,) impres-

* 2, Church Terrace, Richmond, Surrey. NOTE.—I have hitherto permitted Mr. Ward to copy any Turner drawing he was asked to do; but, finding there is a run upon the vignettes of Loch Lomond and Derwent, I have forbidden him to do more of them for the present, lest his work should get the least mechanical. The admirable drawings of Venice, by my good assistant Mr. Bunney, resident there, will become of more value to their purchasers every year, as the buildings from



THE CORONATION IN THE GARDEN.



sions of my favourite plates, containing light and shade which did not improve them.

I do not choose to waste time or space in discussion, till I know more of the matter ; and that more I must leave to my good friend Mr. Reid of the British Museum to find out for me ; for I have no time to take up the subject myself, but I give, for frontispiece to this Appendix, the engraving of Joshua referred to in the text, which however beautiful in thought, is an example of the inferior execution and more elaborate shade which puzzle me. But whatever is said in the previous pages of the plates chosen for example, by whomsoever done, is absolutely trustworthy. Thoroughly fine they are, in their existing state, and exemplary to all persons and times. And of the rest, in fitting place I hope to give complete—or at least satisfactory account.

II.

On the three excellent engravers representative of the first, middle, and late schools.

I have given opposite a photograph, slightly reduced from the Durer Madonna, alluded to often in the text, as an example of his best conception of womanhood. It is very curious that Durer, the least able of all great artists to represent womanhood, should of late have been a very principal object of feminine admiration. The last thing a woman should do is to write about art. They never see anything in pictures but what they are told, (or resolve to see out of contradiction,)—or the particular things that fall in with their own feelings. I saw a curious piece of enthusiastic writing by an Edinburgh lady, the other day, on the photographs I had taken from the tower of Giotto. She did not care a straw what Giotto had meant by them, declared she felt it her duty only to announce

which they are made are destroyed. I was but just in time, working with him at Verona, to catch record of Fra Giocondo's work in the smaller square ; the most beautiful Renaissance design in North Italy.

what they were to *her* ; and wrote two pages on the bas-relief of Heracles and Antæus—assuming it to be the death of Abel.

It is not, however, by women only that Durer has been over-praised. He stands so alone in his own field, that the people who care much for him generally lose the power of enjoying anything else rightly ; and are continually attributing to the force of his imagination quaintnesses which are merely part of the general mannerism of his day.

The following notes upon him, in relation to two other excellent engravers, were written shortly for extempore expansion in lecturing. I give them, with the others in this terminal article, mainly for use to myself in future reference ; but also as more or less suggestive to the reader, if he has taken up the subject seriously, and worth, therefore, a few pages of this closing sheet.

The men I have named as representative of all the good ones composing their school, are alike resolved their engraving shall be lovely.

But Botticelli, the ancient, wants, with as little engraving, as much Sibyl as possible.

Durer, the central, wants, with as much engraving as possible, anything of Sibyl that may chance to be picked up with it.

Beaugrand, the modern, wants, as much Sibyl as possible, and as much engraving too.

I repeat—for I want to get this clear to you—Botticelli wants, with as little engraving, as much Sibyl as possible. For his head is full of Sibyls, and his heart. He can't draw them fast enough ; one comes, and another, and another ; and all, gracious and wonderful and good, to be engraved for ever, if only he had a thousand hands and lives. He scratches down one, with no haste, with no fault, divinely careful, scrupulous, patient, but with as few lines as possible. 'Another Sibyl—let me draw another for heaven's sake, before she has burnt all her books, and vanished.'

Durer is exactly Botticelli's opposite. He is a workman, to the heart, and will do his work magnificently. 'No matter what I do it on, so that my craft be honourably shown. Any-

thing will do ; a Sibyl, a skull, a Madonna and Christ, a hat and a feather, an Adam, an Eve, a cock, a sparrow, a lion with two tails, a pig with five legs,—anything will do for me. But see if I don't show you what engraving is, be my subject what it may'!

Thirdly : Beaugrand, I said, wants as much Sibyl as possible, and as much engraving. He is essentially a copyist, and has no ideas of his own, but deep reverence and love for the work of others. He will give his life to represent another man's thought. He will do his best with every spot and line,—exhibit to you, if you will only look, the most exquisite completion of obedient skill ; but will be content, if you will not look, to pass his neglected years in fruitful peace, and count every day well spent that has given softness to a shadow, or light to a smile.

III.

On Durer's landscape, with reference to the sentence in p. 112 :

"I hope you are pleased."

I spoke just now only of the ill-shaped body of this figure of Fortune, or Pleasure. Beneath her feet is an elaborate landscape. It is all drawn out of Durer's head ;—he would look at bones or tendons carefully, or at the leaf details of foreground ;—but at the breadth and loveliness of real landscape, never.

He has tried to give you a bird's-eye view of Germany ; rocks, and woods, and clouds, and brooks, and the pebbles in their beds, and mills, and cottages, and fences, and what not ; but it is all a feverish dream, ghastly and strange, a monotone of diseased imagination.

And here is a little bit of the world he would not look at—of the great river of his land, with a single cluster of its reeds, and two boats, and an island with a village, and the way for the eternal waters opened between the rounded hills.*

* The engraving of Turner's "Scene on the Rhine" (near Bingen ?) with boats on the right, and reedy foreground on left ; the opening

It is just what you may see any day, anywhere,—innocent, seemingly artless ; but the artlessness of Turner is like the face of Gainsborough's village girl, and a joy forever.

IV.

On the study of anatomy.

The virtual beginner of artistic anatomy in Italy was a man called 'The Poulterer'—from his grandfather's trade ; 'Pollajuolo,' a man of immense power, but on whom the curse of the Italian mind in this age* was set at its deepest.

Any form of passionate excess has terrific effects on body and soul, in nations as in men ; and when this excess is in rage, and rage against your brother, and rage accomplished in habitual deeds of blood,—do you think Nature will forget to set the seal of her indignation upon the forehead ? I told you that the great division of spirit between the northern and southern races had been reconciled in the Val d'Arno. The Font of Florence, and the Font of Pisa, were as the very springs of the life of the Christianity which had gone forth to teach all nations, baptizing them in the name of the Prince of Peace. Yet these two brother cities were to each other—I do not say as Abel and Cain, but as Eteocles and Polynices, and the words of Æschylus are now fulfilled in them to the uttermost. The Arno baptizes their dead bodies :—their native valley between its mountains is to them as the furrow of a grave ;—"and so much of their land they have, as is sepulchre." Nay, not of Florence and Pisa only was this true : Venice and Genoa died in death-grapple ; and eight cities of Lombardy divided between them the joy of levelling Milan to her lowest stone. Nay, not merely in city against city, but in

between its mountain banks in central distance. It is exquisitely engraved, the plate being of the size of the drawing, about ten inches by six, and finished with extreme care and feeling.

* See the horrible picture of St. Sebastian by him in our own National Gallery.

street against street, and house against house, the fury of the Theban dragon flamed ceaselessly, and with the same excuse upon men's lips. The sign of the shield of Polynices, Justice bringing back the exile, was to them all, in turn, the portent of death : and their history, in the sum of it and substance, is as of the servants of Joab and Abner by the pool of Gibeon. "They caught every one his fellow by the head, and thrust his sword in his fellow's side ; so they fell down together : wherefore that place was called 'the field of the strong men.' "

Now it is not possible for Christian men to live thus, except under a fever of insanity. I have before, in my lectures on Prudence and Insolence in art, deliberately asserted to you the logical accuracy of the term 'demoniacal possession'—the being in the power or possession of a betraying spirit ; and the definite sign of such insanity is delight in witnessing pain, usually accompanied by an instinct that gloats over or plays with physical uncleanness or disease, and always by a morbid egotism. It is not to be recognized for demoniacal power so much by its *viciousness*, as its *paltriness*,—the taking pleasure in minute, contemptible, and loathsome things.* Now, in the middle of the gallery of the Brera at Milan, there is an elaborate study of a dead Christ, entirely characteristic of early fifteenth century Italian madman's work. It is called—and was presented to the people as—a Christ ; but it is only an anatomical study of a vulgar and ghastly dead body, with the soles of the feet set straight at the spectator, and the rest foreshortened. It is either Castagno's or Mantegna's,—in my mind, set down to Castagno ; but I have not looked at the picture for years, and am not sure at this moment. It does not matter a straw which : it is exactly characteristic of the madness in which all of them—Pollajuolo, Castagno, Mantegna, Lionardo da Vinci, and Michael Angelo, polluted their work with the science of the sepulchre,† and degraded it with pre-

* As in the muscles of the legs and effort in stretching bows, of the executioners, in the picture just referred to.

† Observe, I entirely distinguish the study of *anatomy*—i.e., of intense bone and muscle—from study of the nude, as the Greeks practised

sumptuous and paltry technical skill. Foreshorten your Christ, and paint him, if you can, half putrefied,—that is the scientific art of the Renaissance.

It is impossible, however, in so vast a subject to distinguish always the beginner of things from the establisher. To the poulterer's son, Pollajuolo, remains the eternal shame of first making insane contest the only subject of art; but the two *establishers* of anatomy were Lionardo and Michael Angelo. You hear of Lionardo chiefly because of his Last Supper, but Italy did not hear of him for that. This was not what brought *her* to worship Lionardo—but the Battle of the Standard.

it. This for an entirely great painter is absolutely necessary; but yet I believe, in the case of Botticelli, it was nobly restricted. The following note by Mr. Tyrwhitt contains, I think, the probable truth:—

“The facts relating to Sandro Botticelli's models, or rather to his favourite model (as it appears to me), are but few; and it is greatly to be regretted that his pictures are seldom dated;—if it were certain in what order they appeared, what follows here might approach moral certainty.

“There is no doubt that he had great personal regard for Fra Filippo, up to that painter's death in 1469, Sandro being then twenty-two years old. He may probably have got only good from him; anyhow he would get a strong turn for Realism,—i.e., the treatment of sacred and all other subjects in a realistic manner. He is described in Crowe and Cavalcaselle from Filippino Lippi's Martyrdom of St. Peter, as a sullen and sensual man, with beetle brows, large fleshy mouth, etc., etc. Probably he was a strong man, and intense in physical and intellectual habit.

“This man, then, begins to paint in his strength, with conviction—rather happy and innocent than not—that it is right to paint any beautiful thing, and best to paint the most beautiful,—say in 1470, at twenty-three years of age. The allegorical Spring and the Graces, and the Aphrodite now in the Uffizi, were painted for Cosmo, and seem to be taken by Vasari and others as early, or early-central, works in his life: also the portrait of Simonetta Vespucci.¹ He is known to have painted much in early life for the Vespucci and the Medici;—and this daughter of the former house seems to have been innamorata or mistress of Giuliano de' Medici, murdered by the Pazzi in 1478. Now it seems agreed by Crowe and Cavalcaselle, Pater, etc., (and I am quite sure of it myself as to the pictures mentioned)—first, that the same slender and long-

¹ Pitti, Stanza di Prometeo, 348.

V.

Fragments on Holbein and others.

Of Holbein's St. Elizabeth, remember, she is not a perfect Saint Elizabeth, by any means. She is an honest and sweet German lady,—the best he could see ; he could do no better ; —and so I come back to my old story,—no man can do better than he sees : if he can reach the nature round him, it is well ; he may fall short of it ; he cannot rise above it ; “ the best, in this kind, are but shadows.”

* * * * *

Yet that intense veracity of Holbein is indeed the strength and glory of all the northern schools. They exist only in be-

throated model appears in Spring, the Aphrodite, Calumny, and other works.¹ Secondly, that she was Simonetta, the original of the Pitti portrait.

“ Now I think she must have been induced to let Sandro draw from her whole person undraped, more or less ; and that he must have done so as such a man probably would, in strict honour as to deed, word, and definite thought, but under occasional accesses of passion of which he said nothing, and which in all probability and by grace of God refined down to nil, or nearly so, as he got accustomed to look in honour at so beautiful a thing. (He may have left off the undraped after her death.) First, her figure is absolutely fine Gothic ; I don't think any antique is so slender. Secondly, she has the sad, passionate, and exquisite Lombard mouth. Thirdly, her limbs shrink together, and she seems not quite to have ‘ liked it,’ or been an accustomed model. Fourthly, there is tradition, giving her name to all those forms.

“ Her lover Giuliano was murdered in 1478, and Savonarola hanged and burnt in 1498. Now, can her distress, and Savonarola's preaching, between them, have taken, in few years, all the carnality out of Sandro, supposing him to have come already, by seventy-eight, to that state in which the sight of her delighted him, without provoking ulterior feelings ? All decent men accustomed to draw from the nude tell us they get to that.

“ Sandro's Dante is dated as published in 1482. He may have been saddening by that time, and weary of beauty, pure or mixed ;—though he went on painting Madonnas, I fancy. (Can Simonetta be traced in

¹ I think Zipporah may be a remembrance of her.

ing true. Their work among men is the definition of what is, and the abiding by it. They cannot dream of what is not. They make fools of themselves if they try. Think how feeble even Shakspeare is when he tries his hand at a Goddess;—women, beautiful and womanly,—as many as you choose; but who cares what his Minerva or Juno, say in the masque of the Tempest? And for the painters—when Sir Joshua tries for a Madonna, or Vandyke for a Diana—they can't even *paint*!

any of them? I think not. The Sistine paintings extend from 1481 to 1484, however. I cannot help thinking Zipporah is impressed with her.) After Savonarola's death, Sandro must have lost heart, and gone into Dante altogether. Most ways in literature and art lead to Dante; and this question about the nude and the purity of Botticelli is no exception to the rule.

"Now in the Purgatorio, Lust is the last sin of which we are to be made pure, and it has to be burnt out of us: being itself as searching as fire, as smouldering, devouring, and all that. *Corruptio optimi pessima*: and it is the most searching and lasting of evils, because it really is a corruption attendant on true Love, which is eternal—whatever the word means. That this is so, seems to me to demonstrate the truth of the Fall of Man from the condition of moral very-goodness in God's sight. And I think that Dante connected the purifying pains of his intermediate state with actual sufferings in this life, working out repentance,—in himself and others. And the 'torment' of this passion, to the repentant or resisting, or purity-seeking soul is decidedly like the pain of physical burning.

"Further, its casuistry is impracticable; because the more you stir the said 'fire,' the stronger hold it takes. Therefore, men and women are *rightly* secret about it, and detailed confessions unadvisable. Much talk about 'hypocrisy' in this matter is quite wrong and unjust. Then, its connexion with female beauty, as a cause of love between man and woman, seems to me to be the inextricable nodus of the Fall, the here inseparable mixture of good and evil, till soul and body are parted. For the sense of seen Beauty is the awakening of Love, at whatever distance from any kind of return or sympathy—as with a rose, or what not. Sandro may be the man who has gone nearest to the right separation of Delight from Desire: supposing that he began with religion and a straight conscience: saw lovingly the error of Fra Filippo's way: saw with intense distant love the error of Simonetta's; and reflected on Florence and *its* way, and drew nearer and nearer to Savonarola, being yet too big a man for asceticism; and finally wearied of all things, and sunk into poverty and peace."

they become total simpletons. Look at Rubens' mythologies in the Louvre, or at modern French heroics, or German pietisms! Why, all—Cornelius, Hesse, Overbeck, and David—put together, are not worth one De Hooghe of an old woman with a broom sweeping a back-kitchen. The one thing we north-erns can do is to find out what is fact, and insist on it: mean fact it may be, or noble,—but fact always, or we die.

Yet the intensest form of northern realization can be matched in the south, when the southernns choose. There are two pieces of animal drawing in the Sistine Chapel unrivalled for literal veracity. The sheep at the well in front of Zip-porah; and afterwards, when she is going away, leading her children, her eldest boy, like every one else, has taken his chief treasure with him, and this treasure is his pet dog. It is a little sharp-nosed white fox-terrier, full of fire and life; but not strong enough for a long walk. So little Gershom, whose name was "the stranger" because his father had been a stranger in a strange land,—little Gershom carries his white terrier under his arm, lying on the top of a large bundle to make it comfortable. The doggie puts its sharp nose and bright eyes out, above his hand, with a little roguish gleam sideways in them, which means,—if I can read rightly a dog's expression,—that he has been barking at Moses all the morn-ing, and has nearly put him out of temper:—and without any doubt, I can assert to you that there is not any other such piece of animal painting in the world,—so brief, intense, vivid, and absolutely balanced in truth; as tenderly drawn as if it had been a saint, yet as humorously as Landseer's Lord Chan-celler poodle.

Oppose to Holbein's Veracity—Botticelli's Fantasy.

"	"	Shade	"	Colour.
"	"	Despair	"	Faith.
"	"	Grossness	"	Purity.

True Fantasy. Botticelli's Tree in Hellespontic Sibyl. Not a real tree at all—yet founded on intensest perception of beau-tiful reality. So the swan of Clio, as opposed to Durer's cock, or to Turner's swan.

The Italian power of abstraction into one mythologic personage—Holbein's death is only literal. He has to split his death into thirty different deaths ; and each is but a skeleton. But Orcagna's death is one—the power of death itself. There may thus be as much *breadth in thought*, as in execution.

* * * * *

What then, we have to ask, is a man *conscious of* in what he sees ?

For instance, in all Cruikshank's etchings—however slight the outline—there is an intense consciousness of light and shade, and of local colour, *as a part* of light and shade ; but none of colour itself. He was wholly incapable of colouring ; and perhaps this very deficiency enabled him to give graphic harmony to engraving.

* * * * *

Bewick—snow-pieces, etc. *Grey* predominant ; *perfect sense of colour*, coming out in patterns of birds ;—yet so uncultivated, that he engraves the brown birds better than pheasant or peacock !

For quite perfect consciousness of colour makes engraving impossible, and you have instead—Correggio.

VI.

Final notes on light and shade.

You will find in the 138th and 147th paragraphs of my inaugural lectures, statements which, if you were reading the book by yourselves, would strike you probably as each of them difficult, and in some degree inconsistent,—namely, that the school of colour has exquisite character and sentiment ; but is childish, cheerful, and fantastic ; while the school of shade is deficient in character and sentiment ; but supreme in intellect and veracity. “The way by light and shade,” I say, “is taken by men of the highest powers of thought and most earnest desire for truth.”

The school of shade, I say, is deficient in character and sentiment. Compare any of Durer's Madonnas with any of Angelico's.

Yet you may discern in the Apocalypse engravings that Durer's mind was seeking for truths, and dealing with questions, which no more could have occurred to Angelico's mind than to that of a two-years'-old baby.

The two schools unite in various degree ; but are always distinguishably generic, the two headmost masters representing each being Tintoret and Perugino. The one, deficient in sentiment, and continually offending us by the want of it, but full of intellectual power and suggestion.

The other, repeating ideas with so little reflection that he gets blamed for doing the same thing over again, (Vasari) ; but exquisite in sentiment and the conditions of taste which it forms, so as to become the master of it to Raphael and to all succeeding him ; and remaining such a type of sentiment, too delicate to be felt by the latter practical mind of Dutch-bred England, that Goldsmith makes the admiration of him the test of absurd connoisseurship. But yet, with under-current of intellect, which gets him accused of free-thinking, and therefore with under-current of entirely exquisite chiaroscuro.

Light and shade, then, imply the understanding of things—Colour, the imagination and the sentiment of them.

In Turner's distinctive work, colour is scarcely acknowledged unless under influences of sunshine. The sunshine is his treasure ; his lividest gloom contains it ; his greyest twilight regrets it, and remembers. Blue is always a blue shadow ; brown or gold, always light ;—nothing is cheerful but sunshine ; wherever the sun is not, there is melancholy or evil. Apollo is God ; and all forms of death and sorrow exist in opposition to him.

But in Perugino's distinctive work,—and therefore I have given him the captain's place over all,—there is simply *no* darkness, *no* wrong. Every colour is lovely, and every space is light. The world, the universe, is divine : all sadness is a part of harmony ; and all gloom, a part of peace.



THE OPENING
OF
THE CRYSTAL PALACE
CONSIDERED IN SOME OF ITS RELATIONS TO THE
PROSPECTS OF ART



THE OPENING OF THE CRYSTAL PALACE

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I READ the account in the *Times* newspaper of the opening of the Crystal Palace at Sydenham, as I ascended the hill between Vevay and Chatel St. Denis, and the thoughts which it called up haunted me all day long, as my road wound among the grassy slopes of the Simmenthal. There was a strange contrast between the image of that mighty palace, raised so high above the hills on which it is built as to make them seem little else than a basement for its glittering stateliness, and those low larch huts, half hidden beneath their coverts of forest, and scattered like gray stones along the masses of far away mountain. Here, man contending with the power of Nature for his existence ; there, commanding them for his recreation : here a feeble folk nested among the rocks with the wild goat and the coney, and retaining the same quiet thoughts from generation to generation ; there, a great multitude triumphing in the splendour of immeasurable habitation, and haughty with hope of endless progress and irresistible power.

It is indeed impossible to limit, in imagination, the beneficent results which may follow from the undertaking thus happily begun. For the first time in the history of the world, a national museum is formed in which a whole nation is in-

terested ; formed on a scale which permits the exhibition of monuments of art in unbroken symmetry, and of the productions of nature in unthwarted growth,—formed under the auspices of science which can hardly err, and of wealth which can hardly be exhausted ; and placed in the close neighbourhood of a metropolis overflowing with a population weary of labour, yet thirsting for knowledge, where contemplation may be consistent with rest, and instruction with enjoyment. It is impossible, I repeat, to estimate the influence of such an institution on the minds of the working-classes. How many hours once wasted may now be profitably dedicated to pursuits in which interest was first awakened by some accidental display in the Norwood palace ; how many constitutions, almost broken, may be restored by the healthy temptation into the country air,—how many intellects, once dormant, may be roused into activity within the crystal walls, and how these noble results may go on multiplying and increasing and bearing fruit seventy times sevenfold, as the nation pursues its career,—are questions as full of hope as incapable of calculation. But with all these grounds for hope there are others for despondency, giving rise to a group of melancholy thoughts, of which I can neither repress the importunity nor forbear the expression.

For three hundred years, the art of architecture has been the subject of the most curious investigation ; its principles have been discussed with all earnestness and acuteness ; its models in all countries and of all ages have been examined with scrupulous care, and imitated with unsparing expenditure. And of all this refinement of enquiry,—this lofty search after the ideal,—this subtlety of investigation and sumptuousness of practice,—the great result, the admirable and long-expected conclusion is, that in the centre of the 19th century, we suppose ourselves to have invented a new style of architecture, when we have magnified a conservatory !

In Mr. Laing's speech, at the opening of the palace, he declares that "*an entirely novel order of architecture*, producing, by means of unrivalled mechanical ingenuity, the most marvellous and beautiful effects, sprang into existence to provide

a building."* In these words, the speaker is not merely giving utterance to his own feelings. He is expressing the popular view of the facts, nor that a view merely popular, but one which has been encouraged by nearly all the professors of art of our time.

It is to this, then, that our Doric and Palladian pride is at last reduced! We have vaunted the divinity of the Greek ideal—we have plumed ourselves on the purity of our Italian taste—we have cast our whole souls into the proportions of pillars, and the relations of orders—and behold the end! Our taste, thus exalted and disciplined, is dazzled by the lustre of a few rows of panes of glass; and the first principles of architectural sublimity, so far sought, are found all the while to have consisted merely in sparkling and in space.

Let it not be thought that I would depreciate (were it possible to depreciate) the mechanical ingenuity which has been displayed in the erection of the Crystal Palace, or that I underrate the effect which its vastness may continue to produce on the popular imagination. But mechanical ingenuity is *not* the essence either of painting or architecture: and largeness of dimension does not necessarily involve nobleness of design. There is assuredly as much ingenuity required to build a screw frigate, or a tubular bridge, as a hall of glass;—all these are works characteristic of the age; and all, in their several ways, deserve our highest admiration; but not admiration of the kind that is rendered to poetry or to art. We may cover the German Ocean with frigates, and bridge the Bristol Channel with iron, and roof the county of Middlesex with crystal, and yet not possess one Milton, or Michael Angelo.

Well, it may be replied, we need our bridges, and have pleasure in our palaces; but we do not want Miltons, nor Michael Angelos.

Truly, it seems so; for, in the year in which the first Crystal Palace was built, there died among us a man whose name, in after ages, will stand with those of the great of all time. Dying, he bequeathed to the nation the whole mass of his

* See the *Times* of Monday, June 12th.

most cherished works: and for these three years, while we have been building this colossal receptacle for casts and copies of the art of other nations, these works of our own greatest painter have been left to decay in a dark room near Cavendish Square, under the custody of an aged servant.

This is quite natural. But it is also memorable.

There is another interesting fact connected with the history of the Crystal Palace as it bears on that of the art of Europe, namely, that in the year 1851, when all that glittering roof was built, in order to exhibit the petty arts of our fashionable luxury—the carved bedsteads of Vienna, and glued toys of Switzerland, and gay jewellery of France—in that very year, I say, the greatest pictures of the Venetian masters were rotting at Venice in the rain, for want of roof to cover them, with holes made by cannon shot through their canvas.

There is another fact, however, more curious than either of these, which will hereafter be connected with the history of the palace now in building; namely, that at the very period when Europe is congratulated on the invention of a new style of architecture, because fourteen acres of ground have been covered with glass, the greatest examples in existence of true and noble Christian architecture were being resolutely destroyed; and destroyed by the effects of the very interest which was slowly beginning to be excited by them.

Under the firm and wise government of the third Napoleon, France has entered on a new epoch of prosperity, one of the signs of which is a zealous care for the preservation of her noble public buildings. Under the influence of this healthy impulse, repairs of the most extensive kind are at this moment proceeding, on the cathedrals of Rheims, Amiens, Rouen, Chartres, and Paris (probably also in many other instances unknown to me). These repairs were, in many cases, necessary up to a certain point; and they have been executed by architects as skilful and learned as at present exist,—executed with noble disregard of expense, and sincere desire on the part of their superintendents that they should be completed in a manner honourable to the country.

They are nevertheless more fatal to the monuments they

are intended to preserve, than fire, war, or revolution. For they are undertaken, in the plurality of instances, under an impression, which the efforts of all true antiquaries have as yet been unable to remove, that it is possible to reproduce the mutilated sculpture of past ages in its original beauty.

"Reproduire avec une exactitude mathématique," are the words used, by one of the most intelligent writers on this subject,* of the proposed regeneration of the statue of Ste. Modeste, on the north porch of the Cathedral of Chartres.

Now, it is not the question at present, whether 13th century sculpture be of value, or not. Its value is assumed by the authorities who have devoted sums so large to its so-called restoration, and may therefore be assumed in my argument. The worst state of the sculptures whose restoration is demanded may be fairly represented by that of the celebrated group of the Fates, among the Elgin Marbles in the British Museum. With what favour would the guardians of those marbles, or any other persons interested in Greek art, receive a proposal from a living sculptor to "reproduce with mathematical exactitude" the group of the Fates, in a perfect form, and to destroy the original? For with exactly such favour, those who are interested in Gothic art should receive proposals to reproduce the sculpture of Chartres or Rouen.

In like manner, the state of the architecture which it is proposed to restore, may, at its worst, be fairly represented to the British public by that of the best preserved portions of Melrose Abbey. With what encouragement would those among us who are sincerely interested in history, or in art, receive a proposal to pull down Melrose Abbey, and "reproduce it mathematically?" There can be no doubt of the answer which, in the instances supposed, it would be proper to return. "By all means, if you can, reproduce mathematically, elsewhere, the group of the Fates, and the Abbey of Melrose. But leave unharmed the original fragment, and the existing ruin." And an answer of the same tenour ought to be given to every proposal to restore a Gothic sculpture or building.

* M. l'Abbé Bulteau, *Description de la Cathédrale de Chartres*, (8vo. Paris, Sagnier et Bray, 1850), p. 98, *note*.

Carve or raise a model of it in some other part of the city: but touch not the actual edifice, except only so far as may be necessary to sustain, to protect it. I said above that repairs were in many instances necessary. These necessary operations consist in substituting new stones for decayed ones, where they are absolutely essential to the stability of the fabric; in propping, with wood or metal, the portions likely to give way; in binding or cementing into their places the sculptures which are ready to detach themselves; and in general care to remove luxuriant weeds, and obstructions of the channels for the discharge of the rain. But no modern or imitative sculpture ought *ever*, under any circumstances, to be mingled with the ancient work.

Unfortunately, repairs thus conscientiously executed are always unsightly, and meet with little approbation from the general public; so that a strong temptation is necessarily felt by all superintendents of public works, to execute the required repairs in a manner which, though indeed fatal to the monument, may be, in appearance, seemly. But a far more cruel temptation is held out to the architect. He who should propose to a municipal body, to build in the form of a new church, to be erected in some other part of their city, models of such portions of their cathedral as were falling into decay, would be looked upon as merely asking for employment, and his offer would be rejected with disdain. But let an architect declare that the existing fabric stands in need of repairs, and offer to restore it to its original beauty, and he is instantly regarded as a lover of his country, and has a chance of obtaining a commission which will furnish him with a large and steady income, and enormous patronage, for twenty or thirty years to come.

I have great respect for human nature. But I would rather leave it to others than myself to pronounce how far such a temptation is always likely to be resisted, and how far, when repairs are once permitted to be undertaken, a fabric is likely to be spared from mere interest in its beauty, when its destruction, under the name of restoration, has become permanently remunerative to a large body of workmen.

Let us assume, however, that the architect is always conscientious—always willing, the moment he has done what is strictly necessary for the safety and decorous aspect of the building, to abandon his income, and declare his farther services unnecessary. Let us presume, also, that every one of the two or three hundred workmen who must be employed under him, is equally conscientious, and, during the course of years of labour, will never destroy in carelessness what it may be inconvenient to save, or in cunning, what it is difficult to imitate. Will all this probity of purpose preserve the hand from error, and the heart from weariness? Will it give dexterity to the awkward—sagacity to the dull—and at once invest two or three hundred imperfectly educated men with the feeling, intention, and information, of the freemasons of the 13th century? Grant that it can do all this, and that the new building is both equal to the old in beauty, and precisely correspondent to it in detail. Is it, therefore, altogether *worth* the old building? Is the stone carved to-day in their masons' yards altogether the same in value to the hearts of the French people as that which the eyes of St. Louis saw lifted to its place? Would a loving daughter, in mere desire for gaudy dress, ask a jeweller for a bright facsimile of the worn cross which her mother bequeathed to her on her death-bed?—would a thoughtful nation, in mere fondness for splendour of streets, ask its architects to provide for it facsimiles of the temples which for centuries had given joy to its saints, comfort to its mourners, and strength to its chivalry?

But it may be replied, that all this is already admitted by the antiquaries of France and England; and that it is impossible that works so important should now be undertaken without due consideration and faithful superintendence.

I answer, that the men who justly feel these truths are rarely those who have much influence in public affairs. It is the poor abbé, whose little garden is sheltered by the mighty buttresses from the north wind, who knows the worth of the cathedral. It is the bustling mayor and the prosperous architect who determine its fate.

I answer farther, by the statement of a simple fact. I have

given many years, in many cities, to the study of Gothic architecture ; and of all that I know, or knew, the entrance to the north transept of Rouen Cathedral was, on the whole, the most beautiful—beautiful, not only as an elaborate and faultless work of the finest time of Gothic art, but yet more beautiful in the partial, though not dangerous, decay which had touched its pinnacles with pensive colouring, and softened its severer lines with unexpected change, and delicate fracture, like sweet breaks in a distant music. The upper part of it has been already restored to the white accuracies of novelty ; the lower pinnacles, which flanked its approach, far more exquisite in their partial ruin than the loveliest remains of our English abbeys, have been entirely destroyed, and rebuilt in rough blocks, now in process of sculpture. This restoration, so far as it has gone, has been executed by peculiarly skilful workmen ; it is an unusually favorable example of restoration, especially in the care which has been taken to preserve intact the exquisite, and hitherto almost uninjured sculptures which fill the quatrefoils of the tracery above the arch. But I happened myself to have made, five years ago, detailed drawings of the buttress decorations on the right and left of this tracery, which are part of the work that has been completely restored. And I found the restorations as inaccurate as they were unnecessary.

If this is the case in a most favourable instance, in that of a well-known monument, highly esteemed by every antiquary in France, what, during the progress of the now almost universal repairs, is likely to become of architecture which is unwatched and despised ?

Despised ! and more than despised—even hated ! It is a sad truth, that there is something in the solemn aspect of ancient architecture which, in rebuking frivolity and chastening gaiety, has become at this time literally *repulsive* to a large majority of the population of Europe. Examine the direction which is taken by all the influences of fortune and of fancy, wherever they concern themselves with art, and it will be found that the real, earnest effort of the upper classes of European society is to make every place in the world as much

like the Champs Elysées of Paris as possible. Wherever the influence of that educated society is felt, the old buildings are relentlessly destroyed ; vast hotels, like barracks, and rows of high, square-windowed dwelling-houses, thrust themselves forward to conceal the hated antiquities of the great cities of France and Italy. Gay promenades, with fountains and statues, prolong themselves along the quays once dedicated to commerce ; ball-rooms and theatres rise upon the dust of desecrated chapels, and thrust into darkness the humility of domestic life. And when the formal street, in all its pride of perfumery and confectionery, has successfully consumed its way through the wrecks of historical monuments, and consummated its symmetry in the ruin of all that once prompted to reflection, or pleaded for regard, the whitened city is praised for its splendour, and the exulting inhabitants for their patriotism—patriotism which consists in insulting their fathers with forgetfulness, and surrounding their children with temptation.

I am far from intending my words to involve any disrespectful allusion to the very noble improvements in the city of Paris itself, lately carried out under the encouragement of the Emperor. Paris, in its own peculiar character of bright magnificence, had nothing to fear, and everything to gain, from the gorgeous prolongations of the Rue Rivoli. But I speak of the general influence of the rich travellers and proprietors of Europe on the cities which they pretend to admire, or endeavour to improve. I speak of the changes wrought during my own lifetime, on the cities of Venice, Florence, Geneva, Lucerne, and chief of all on Rouen : a city altogether inestimable for its retention of mediæval character in the infinitely varied streets in which one half of the existing and inhabited houses date from the 15th or early 16th century ; and the only town left in France in which the effect of old French domestic architecture can yet be seen in its collective groups. But when I was there, this last spring, I heard that these noble old Norman houses are all, as speedily as may be, to be stripped of the dark slates which protected their timbers, and deliberately whitewashed over all their sculptures and orna-

ments, in order to bring the interior of the town into some conformity with the "handsome fronts" of the hotels and offices on the quay.

Hotels and offices, and "handsome fronts" in general—they can be built in America or Australia—built at any moment, and in any height of splendour. But who shall give us back, when once destroyed, the habitations of the French chivalry and bourgeoisie, in the days of the Field of the Cloth of Gold?

It is strange that no one seems to think of this! What do men travel for, in this Europe of ours? Is it only to gamble with French dies—to drink coffee out of French porcelain—to dance to the beat of German drums, and sleep in the soft air of Italy? Are the ball-room, the billiard-room, and the Boulevard, the only attractions that win us into wandering, or tempt us to repose? And when the time is come, as come it will, and that shortly, when the parsimony—or lassitude—which, for the most part, are the only protectors of the remnants of elder time, shall be scattered by the advance of civilisation—when all the monuments, preserved only because it was too costly to destroy them, shall have been crushed by the energies of the new world, will the proud nations of the twentieth century, looking round on the plains of Europe, disencumbered of their memorial marbles,—will those nations indeed stand up with no other feeling than one of triumph, freed from the paralysis of precedent and the entanglement of memory, to thank us, the fathers of progress, that no saddening shadows can any more trouble the enjoyments of the future,—no moments of reflection retard its activities; and that the new-born population of a world without a record and without a ruin, may, in the fulness of ephemeral felicity, dispose itself to eat, and to drink, and to die?

Is this verily the end at which we aim, and will the mission of the age have been then only accomplished, when the last castle has fallen from our rocks, the last cloisters faded from our valleys, the last streets, in which the dead have dwelt, been effaced from our cities, and regenerated society is left in luxurious possession of towns composed only of bright saloons,

overlooking gay parterres? If this be indeed our end, yet why must it be so laboriously accomplished? Are there no new countries on the earth, as yet uncrowned by Thorns of cathedral spires, untormented by the consciousness of a past? Must this little Europe—this corner of our globe, gilded with the blood of old battles, and grey with the temples of old pieties—this narrow piece of the world's pavement, worn down by so many pilgrims' feet, be utterly swept and garnished for the masque of the Future? Is America not wide enough for the elasticities of our humanity? Asia not rich enough for its pride? or among the quiet meadow-lands and solitary hills of the old land, is there not yet room enough for the spreadings of power, or the indulgences of magnificence, without founding all glory upon ruin, and prefacing all progress with obliteration?

We must answer these questions speedily, or we answer them in vain. The peculiar character of the evil which is being wrought by this age is its utter irreparableness. Its newly formed schools of art, its extending galleries, and well-ordered museums will assuredly bear some fruit in time, and give once more to the popular mind the power to discern what is great, and the disposition to protect what is precious. But it will be too late. We shall wander through our palaces of crystal, gazing sadly on copies of pictures torn by cannon-shot, and on casts of sculpture dashed to pieces long ago. We shall gradually learn to distinguish originality and sincerity from the decrepitudes of imitation and palsies of repetition; but it will be only in hopelessness to recognise the truth, that architecture and painting can be "restored" when the dead can be raised,—and not till then.

Something might yet be done, if it were but possible thoroughly to awaken and alarm the men whose studies of archæology have enabled them to form an accurate judgment of the importance of the crisis. But it is one of the strange characters of the human mind, necessary indeed to its peace, but infinitely destructive of its power, that we never thoroughly feel the evils which are not actually set before our eyes. If, suddenly, in the midst of the enjoyments of the

palate and lightnesses of heart of a London dinner-party, the walls of the chamber were parted, and through their gap, the nearest human beings who were famishing, and in misery, were borne into the midst of the company—feasting and fancy-free—if, pale with sickness, horrible in destitution, broken by despair, body by body, they were laid upon the soft carpet, one beside the chair of every guest, would only the crumbs of the dainties be cast to them—would only a passing glance, a passing thought be vouchsafed to them? Yet the actual facts, the real relations of each Dives and Lazarus, are not altered by the intervention of the house wall between the table and the sick-bed—by the few feet of ground (how few!) which are indeed all that separate the merriment from the misery.

It is the same in the matters of which I have hitherto been speaking. If every one of us, who knows what food for the human heart there is in the great works of elder time, could indeed see with his own eyes their progressive ruin; if every earnest antiquarian, happy in his well-ordered library, and in the sense of having been useful in preserving an old stone or two out of his parish church, and an old coin or two out of a furrow in the next ploughed field, could indeed behold, each morning as he awaked, the mightiest works of departed nations mouldering to the ground in disregarded heaps; if he could always have in clear phantasm before his eyes the ignorant monk trampling on the manuscript, the village mason striking down the monument, the court painter daubing the despised and priceless masterpiece into freshness of fatuity, he would not always smile so complacently in the thoughts of the little learnings and petty preservations of his own immediate sphere. And if every man who has the interest of Art and of History at heart, would at once devote himself earnestly—not to enrich his own collection—not even to enlighten his own neighbours or investigate his own parish-territory—but to far-sighted and *fore-sighted* endeavour in the great field of Europe, there is yet time to do much. An association might be formed, thoroughly organised so as to maintain active watchers and agents in every town of importance, who, in the first place,

should furnish the society with a *perfect* account of every monument of interest in its neighbourhood, and then with a yearly or half-yearly report of the state of such monuments, and of the changes proposed to be made upon them ; the society then furnishing funds, either to buy, freehold, such buildings or other works of untransferable art as at any time might be offered for sale, or to assist their proprietors, whether private individuals or public bodies, in the maintenance of such guardianship as was really necessary for their safety ; and exerting itself, with all the influence which such an association would rapidly command, to prevent unwise restoration, and unnecessary destruction.

Such a society would of course be rewarded only by the consciousness of its usefulness. Its funds would have to be supplied, in pure self-denial, by its members, who would be required, so far as they assisted it, to give up the pleasure of purchasing prints or pictures for their own walls, that they might save pictures which in their lifetime they might never behold ;—they would have to forego the enlargement of their own estates, that they might buy, for a European property, ground on which their feet might never tread. But is it absurd to believe that men are capable of doing this? Is the love of art altogether a selfish principle in the heart? and are its emotions altogether incompatible with the exertions of self-denial, or enjoyments of generosity?

I make this appeal at the risk of incurring only contempt for my Utopianism. But I should forever reproach myself if I were prevented from making it by such a risk ; and I pray those who may be disposed in anywise to favour it, to remember that it must be answered at once or never. The next five years determine what is to be saved—what destroyed. The restorations have actually begun like cancers on every important piece of Gothic architecture in Christendom ; the question is only how much can yet be saved. All projects, all pursuits, having reference to art, are at this moment of less importance than those which are simply protective. There is time enough for everything else. Time enough for teaching—time enough for criticising—time enough for inventing. But time little

enough for saving. Hereafter we can create, but it is now only that we can preserve. By the exertion of great national powers, and under the guidance of enlightened monarchs, we may raise magnificent temples and gorgeous cities ; we may furnish labour for the idle, and interest for the ignorant. But the power neither of emperors, nor queens, nor kingdoms, can ever print again upon the sands of time the effaced footsteps of departed generations, or gather together from the dust the stones which had been stamped with the spirit of our ancestors.

THE END.

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